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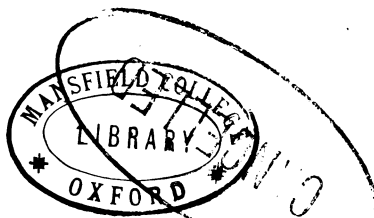
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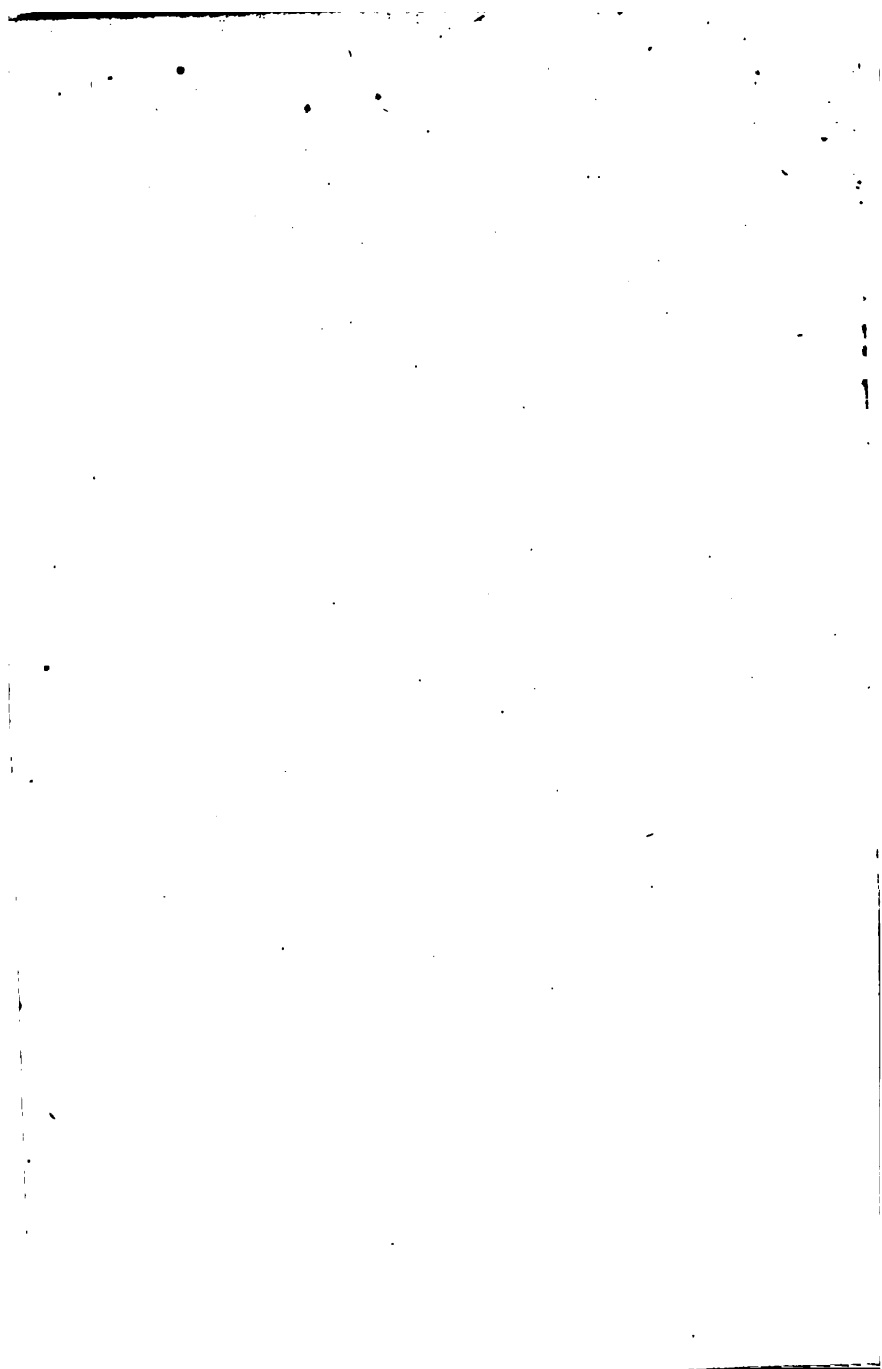


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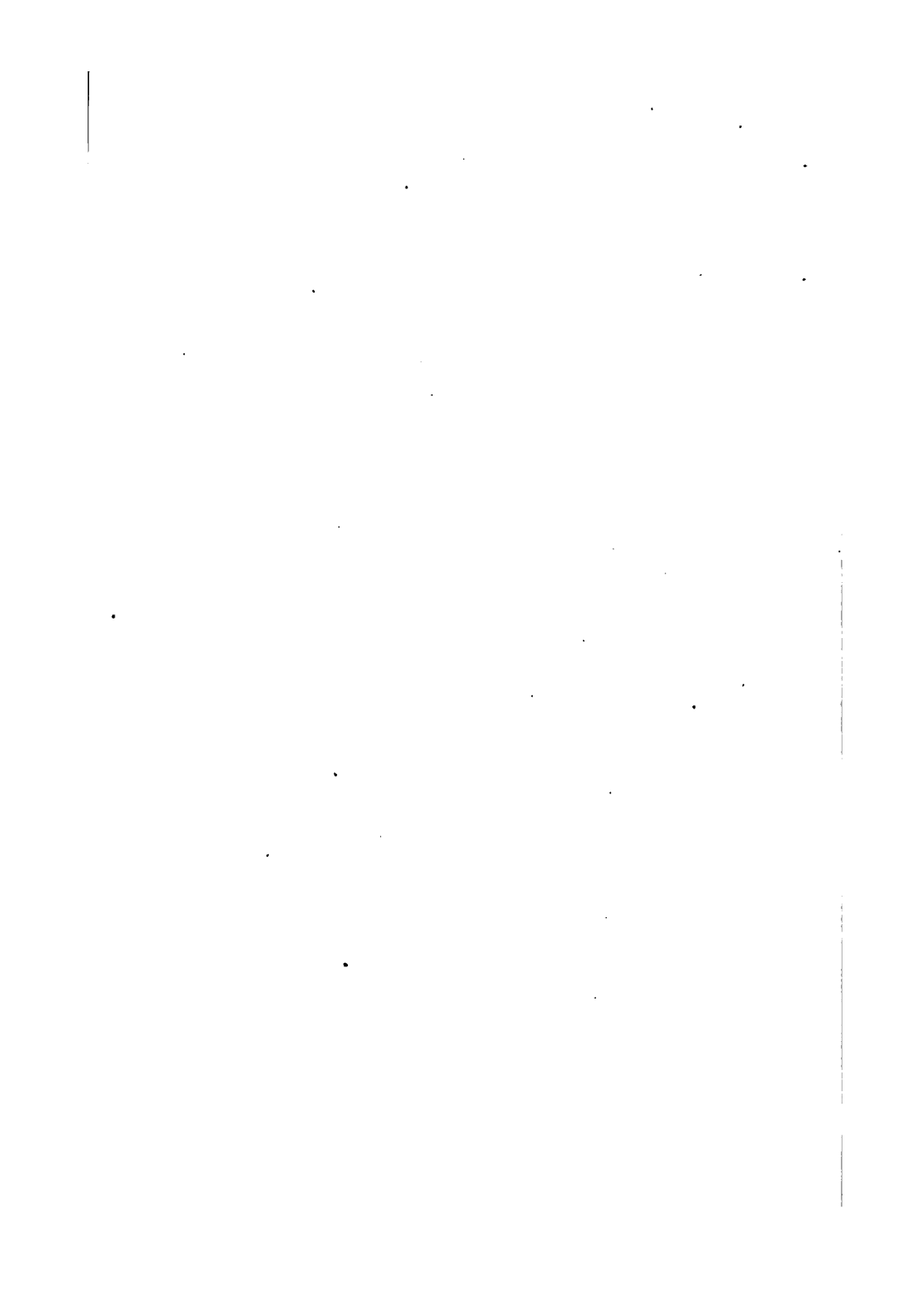
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THE HUMAN MIND.



THE HUMAN MIND:

A SYSTEM OF

MENTAL PHILOSOPHY,

FOR THE GENERAL READER.

BY

JAMES G. MURPHY, LL.D.,

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Ἐαυτοὺς δοκιμάζετε.

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P R E F A C E.

A KNOWLEDGE of themselves ought to have a paramount place in the education of the youth of both sexes. This seems to be a proposition which only requires to be heard in order to be admitted. "Know thyself," is a justly celebrated saying of one of the ancient sages of Greece. As we are embodied spirits, this knowledge branches into two parts: physiology, the knowledge of our bodies; and psychology, the knowledge of our minds.

It is beginning to be confessed that some information concerning the natural and healthy development of the body ought to form a part of a thorough education. Our ability to discharge the active duties and enjoy the true pleasures of life depends on the state of the health. This is endangered by ignorance of the common laws of our bodily frame, and of the mode in which they are to be applied for the preservation of health and the prevention as far as possible of disease. A few lessons on these topics would be of immense value to the inexperienced girls or boys in their school days: for the lessons obtained by personal experience are all too costly, and often come too late. A still farther degree of instruction would be of essential benefit to those who are about to enter upon married life and become parents, both for their own guidance and for the proper management of their children.

An acquaintance with the constitution of our minds is even more necessary than a knowledge of the elements of physiology. The mind is the man; the body is only its tenement and instrument. The mind is the intelli-

gent principle, which is alone able to study and apprehend the nature and function of the body, the connection of the body with the mind, and the faculties and capacities of the mind itself. It is the responsible reason that acknowledges the infinite majesty and absolute authority of God, and appreciates the immutable obligations of duty to the supreme Being, and, under Him, to the intelligent and sentient creation. It is the prime mover in the affairs of men, in the agriculture, manufacture, and commerce of the world, in the process of education, the working of the Press, the business of the State, and the administration of the Church. And the humblest member of society has some important part to perform in most of these matters. A right knowledge of our own minds, then, lies at the foundation of all other right knowledge, and of all fitness for estimating and discharging the duties of life. Hence it is manifest that a course of instruction in the first principles of mental philosophy ought to form an essential part in the education of the whole community. A well-nurtured mind is quite as necessary for the business of life as reading, writing, and arithmetic, more necessary than the elements of human physiology, and much more necessary than the natural sciences which are now pushing their way into our schools and colleges.

It is high time also for the metaphysician to claim a first place for the study of mind in the education of youth. There are two modes of investigating the mind prevalent in our day. The one proceeds from matter to mind, from physiology to psychology; and so makes the exposition of mind dependent on the science of matter. An able and highly-distinguished naturalist makes the following statement:—"In itself it is of little moment whether we express the phenomena of matter in terms of spirit, or the phenomena of spirit in terms of matter; matter may be regarded as a form of thought, thought may be regarded as a property of matter—each state-

ment has a certain relative truth. But with a view to the progress of science, the materialistic terminology is in every way to be preferred. . . . Thus there can be little doubt that the further science advances the more extensively and consistently will all the phenomena of nature be represented by materialistic formulæ and symbols." This statement is very tolerant—tolerant indeed even to indifference; for it goes a great way to confound matter and mind. But it is at the same time very arrogant: for it assumes that certain terms of science—namely, we presume, the formulæ of algebra and geometry—are terms of matter; and it anticipates that as far as science advances all its phenomena will be expressed in these terms. This implies either that there can be no proper science of mind, or that it may be expressed in terms of quantity and number. It is unwarrantable in an advanced naturalist to make these dogmatical assertions regarding mind. He is of course aware that all that is known of mathematical truth is a product of the human mind, and that it may be applied to such facts of mind, as well as matter, as admit of number and measure; while there are facts concerning matter, as well as mind, which cannot be expressed in such terms. But the naturalist is tempted to rush to such conclusions, especially when he finds a certain class of psychologists pursuing this mode of treating the mind.

The other mode of investigation is to proceed directly to the mind itself, to ascertain the facts of consciousness, and arrange them under their proper heads in a systematic form. There are two great facilities for doing so. The whole field of investigation is within a man's own bosom, and requires only sound sense, patience, fidelity, and a careful course of training, to enter upon the inquiry with a fair prospect of success. An invaluable training has been provided in the philosophers of Greece, the scholastics of the Middle Ages, and in the meta-

physical writers of modern times, combined with the light thrown on the subject by the history of man. Starting with this preliminary training, and the intellectual and moral qualities above mentioned, on the narrowly circumscribed field within, we have undeniable advantages for studying the principles and drawing nearer and nearer to the science of the human mind. The mind may, no doubt, exercise itself upon matter, mineral and organic. But it is to be remembered that it is the mind that so exercises itself; and it is beyond all controversy that in this case the agent is superior to the patient, and is the worthier and more accessible theme of examination. And if we are to make safe and satisfactory progress in the science of the outer world, it must be by thoroughly understanding the instrument we have to use, and duly sharpening it for the work it has to do. The following is the memorable statement of Locke on this subject:—"Five or six friends; meeting at my chamber, and discoursing on a subject very remote from this (the understanding), found themselves quickly at a stand by the difficulties that rose on every side. After we had a while puzzled ourselves, without coming to any nearer a resolution of those doubts which perplexed us, it came into my thoughts that we took a wrong course; and that, before we set ourselves upon enquiries of that nature, it was necessary to examine our own abilities, and see what objects our understandings were, or were not, fitted to deal with. This I proposed to the company, who all readily assented; and thereupon it was agreed that this should be our first enquiry."

Locke, though in some sense the father of English philosophy, left it in a very imperfect state. Reid is to be regarded as the next founder of mental science. Sir William Hamilton has been a master builder in the same edifice. He has done much to elucidate and defend Natural Realism, the main principle of the philo-

sophy of Reid; but he has not been as consistent and thorough-going as his chief in the application of this principle. These great writers have laid the foundations of a true mental philosophy, and have contributed largely to rear up the superstructure.

The present essay rests on the same foundations, though the superstructure is in some essential respects different. The plan of the work may be seen from the contents. This treatise may want some things, which might have been expected; but it is among the briefest of those that have gone over the whole field of the mind. It is intended for the general reader, and is therefore comparatively free from technicalities. It is specially designed for the young of both sexes, who are entering upon the study of their own minds. The writer has done his best to arrive at the real facts of the human mind, and to convey them in simple and intelligible language. He has also endeavoured to trace their mutual connection, and reduce them to a system in harmony with itself, with the world around, and with the God above. He has no doubt that a thorough training in mental philosophy would be an invaluable help to the understanding and interpretation of the work and word of God, lend essential aid to the parent and to all that are engaged in the training of youth, and prove an inestimable benefit to all who have the management of adults in the private walks of business or the public affairs of the State. It is not to be expected that a treatise of this brief compass will answer all these demands; but it will at least suggest topics for thought and study, and prepare the way for pursuing with advantage a more extensive course of reading.

It offers at the same time some amendments in the explication and arrangement of the functions of the mind. It suggests a somewhat different division of the mental faculties, and signalises intuition as a special function of the understanding. It attempts to rectify

the distinction of matter and mind, of sensation and perception, of quality and relation. It endeavours to determine the function of consciousness, the proper meaning of idea, and the real division of the qualities of bodies. In the region of the will it points out the place of emotion, and the character and function of conscience. It raises power, properly so called, to a primary place in the spirit, and assigns to it a separate discussion. For these results the writer's appeal is to the facts of consciousness. And he submits his work with all deference to the consideration of the mental philosopher, as a somewhat nearer approach to the real character of the mind than that of Reid, the founder, or even Hamilton, the lucid and eloquent expositor and defender of the true system of mental philosophy.

THE HUMAN MIND.

INTRODUCTION.

I. FORCE.

THERE is a gradation, as well as a variety, in the unity of things. At the lowest stage is matter. The fundamental properties of matter are law, need, and force. Force is any potency whatever under the two conditions of law and need. Need, or necessity, is the blind involuntary constancy with which it must act in given circumstances. Law is the rule, or condition, according to which it proceeds. Matter¹ is, in short, a seat of force.²

Force in one element of matter implies the corresponding capacity in another. This capacity is merely another force, capable of receiving the influence of the former, and returning it with a grasp of its own. By the former, one element of matter affects another; by the latter, the other is so affected by the one. Matter, then, is that which has force and capacity. This involves the correlation of force with force.³

The active and passive qualities of matter vary in kind; some are also general, and others special. Hence arise different kinds of matter, characterised by their

respective qualities. There are mechanical, attractive, and repulsive qualities in the different species of matter ; but by far the most numerous are the forces called chemical affinities. Special qualities of this sort belong to each kind of matter. There are said to be about sixty apparently simple material substances, of which oxygen, hydrogen, nitrogen, chlorine, iodine, bromine, fluorine, carbon, boron, sulphur, selenium, and phosphorus are said to be non-metallic ; while the remainder come under the head of metals.

Some general qualities are common to most, if not to all, of these kinds, as weight or heat. Weight or gravity has, so far as we know, an unlimited range. As it draws to a centre, its effect on another centre varies inversely as the square of the distance. Heat is in some respect the antagonist of weight, and, indeed, of all attractive forces. It is latent in all matter. It belongs to the class of qualities comprising heat, light, electricity, and magnetism ; the two former of which radiate from a centre or mass, while the two latter seem to act in a line or a surface. It is conspicuous in every chemical change. It is one of the most potent forces in nature, and insinuates itself among the molecules of matter. Light, radiating from a centre, varies in strength inversely as the square of the distance, and therefore may be as unlimited in range as the attractive force of gravity. Hence an actual centre of light or weight may dynamically occupy the whole of space. Light is essential to growth as well as chemical affinity, and stands on the verge of the material world, where it borders on the physical.⁴

Matter in the mass, when homogeneous, takes three

notable forms, commonly called the solid, the fluid, and the gaseous states, familiar to us in land, water, and air. Many kinds of matter, as water, subsist, and it is probable that all might subsist in these three states. In the solid state, its ultimate monads or molecules clasp one another so tightly that it requires violence or effort to displace them. In the liquid state, they have relaxed their grasp so far as to move passively among themselves, and are in general, though not always, at a somewhat greater distance. But in the gaseous state the cohesive force has given way to the repulsive, and the distance between the molecules is signally enlarged. In all these states the material mass is capable, more or less, of compression. It follows from these facts that the ultimate molecules of matter are not in contact,⁵ but are held asunder by a repulsive force, which comes into action at a minute distance, is considerably overcome by cohesion, and may be still farther coerced by pressure. Every force has a certain range; and contact is not of rigid atoms, but only of forces and capacities.⁶

Hence it is highly probable, if not absolutely certain, that the ultimate molecule of matter is a mathematical point or centre of forces, varying according to its kind, which does not occupy space at all in the usual sense of the phrase. The cohesive and repulsive forces of these particles balance each other, and leave the centres where they act at a certain distance from one another. These molecules may be complex, the monads or simple atoms of which they are composed being apparently brought to a common centre by chemical affinity.⁷

The nature of matter, then, seems to be this. It consists of monads, or simple atoms of various kinds, having

each its chemical and other forces or qualities. If monads of different kinds meet, their chemical affinities come into action, and they form molecules or complex centres of force, by the chemical concentration of several simple atoms. If monads of the same kind meet, the chemical qualities are in abeyance, and they are influenced by the repulsive, cohesive, liquefying, solidifying, crystallizing, and metallizing forces, and so take the form of gases, liquids, or solids of different kinds, as the case may be. The same process takes place among the molecules and the monads that remain after the chemical tendencies have taken effect. The chemical force seems to overbear the repulsive, and to produce actual concentricity of atoms; the other attractive forces are checked and counterbalanced at a certain point by the repulsive, and establish mere contiguity. A mass of these contiguous atoms, constituting a vapour, liquid, or solid, occupies a portion of space, in the ordinary meaning of the phrase.

II. LIFE.

By a gigantic step we ascend from force to life. As the material atom has its characteristic forces, so the vital monad has its distinctive potences. And as one kind of matter is distinguished from another by the nature of its forces, so the living principle⁸ is distinguished from the material element by the peculiarity of its potences. The physical potences⁹ belong, not to matter in itself, but to the principle of life in its diverse forms; but they meet with corresponding capacities or affectibilities in several kinds of matter. The chief vital potences are those of assimilation, organization,

growth, and propagation in plants and animals, and those of sensation, instinct, and motion in animals. The simple kinds of matter are said to be about sixty; but the species of plants and animals amount to many thousands. There is a gradual ascent from the lowest form of vegetable life, which can hardly be distinguished from mere matter; and there is a similar ascent from the lowest animal, which is scarcely distinguishable from a plant. But the noblest plant is by no means the transition to the meanest animal: on the contrary, it is the most obviously distinct from the mineral on the one hand, and the animal on the other.

III. MIND.

By a still more gigantic step we ascend from life to mind, from the animal to the man. As the animal is distinct from the plant, and the plant from the mineral, so is man essentially distinct from the animal.

Man is a person, or intelligent individual. He has indeed a body, an organ composed of matter, in and by which he performs his functions. But the materials of this organic frame are liable to change. It is a familiar fact that matter exists apart from man or any other living being in immense masses; and the matter of which his body is composed is subject to decomposition or resolution into its former inorganic elements. From the primitive cell or system of cells in which he began his existence, his body grows by accretion of material particles out of the common mass, while it is unceasingly wasting by secretion, and at length falls into total decay.

Man has also, however, a mind, a soul, a spirit. Mind (*mens*, νοῦς) we are to understand as the counterpart of matter in the sum of things. Soul (*anima*, ψυχή) is used to express the complement of body in man. Spirit (*spiritus*, πνεῦμα) is taken in a greater breadth of meaning, to denote an intelligent being, subsisting apart from, as well as in, a body. In actual usage, the first term seems to give prominence to the understanding, the second to the will, and the third to the power of man. We commonly employ mind when we talk of our connexion with our fellow-men, soul when we speak of our relation to God, and spirit when we refer to intelligent beings in general.

The mind is that which can think, will, act. It is a simple substance. The ordinary human mind comes into existence housed in a minute organ, which it endows with life, growth, and manifold movement, and employs for ends far transcending the mere organic or animal constitution. It is manifest that it is the mind that makes the man, while the body is but the outgrowth and instrument, by which it is brought into working connexion with the surrounding world of men and things.¹⁰

Man becomes acquainted with his mind directly and mainly by means of consciousness, and indirectly through some minor avenues which consciousness unfolds. Hence, to put on record the whole testimony of consciousness in a systematic form is to construct the science of mind.

The process of mind is really one, as it flows from an indivisible monad of intelligence; but it is at the same time extremely intricate and vastly diversified. To dis-

entangle the process, to distinguish its parts, to refer them to their several powers, to ascertain their natural order and mutual connexion, is a task that has more or less engaged the attention of man from the date of his origin. It is difficult to exhibit the result of such researches clearly in a consecutive order; as in the nature of things several parts of the mental process occur together in a concrete form. It will be necessary, therefore, in explaining some of these parts, to anticipate others that must fall to be discussed at a subsequent period, and so to indulge in a certain amount of occasional repetition. This being premised, let us proceed to unfold the testimony of consciousness.

The human mind has three leading properties, under which all others may be arranged—understanding, will, and power; the chief operations of which are—thinking, willing, and doing. The terms, understanding and will, we use in a large sense: the former to embrace the cognitive and contemplative faculties of the mind; the latter to denote the faculty from which all the emotions, inclinations, and volitions proceed. Power, on the other hand, is employed in a narrower sense than usual, to indicate the active faculty of the mind. It has been little noticed by philosophers as a distinct and primary quality of mind. Its recognition in this, its right place, will serve to rectify so far the science of mind.¹¹

The corresponding general properties of matter are found to be law, need, and force. Law is the rule according to which the force acts, and comports with the understanding, the fountain of order. Need, or necessity, is the unconscious, involuntary constancy of the law. This has its parallel and counterpart in the will, which

is the faculty of determination. Force is any potency whatever, under the two conditions of law and need. It therefore stands over against power, which is any potency under the guidance of reason and choice.

From the above definitions of matter and mind, it follows that matter cannot originate anything, while mind may. Matter, being the seat of force, acts according to necessity in the circumstances in which it is placed; and its different species, being brought into juxtaposition, will go through a definite series of combinations, resolutions, and alterations, corresponding with the accidents in which their properties come into contact, and calculable by a mind competent to discern their several natures and conditions. Hence it merely develops its fixed potences and capacities, without originating anything new. Mind, on the other hand, being a seat of power—that is, of potency governed by intelligence and choice—may call into existence new circumstances, laws, necessities, and forces to the utmost extent of its inherent ability. And as we can affix no limit but a pure impossibility to the power of a spiritual being, it is undeniable that a spirit may exist of power adequate to originate all the varieties of matter in actual existence.¹²

The above-mentioned qualities of mind are its essential and inseparable conditions. We may indeed conceive intelligence without any outgoing of will or power consequent thereon, or will without any such outgoing of power. But the very process of thought involves within itself such displays of will and power as comport with its nature; and willing includes, in like manner and extent, the exercise of power.

Power, on the other hand, in whatever form it presents

itself, presupposes will and understanding. For power is to be distinguished from force. Force is fixed potence, acting of necessity in given conditions. Power is free potence, or the ability to put forth energy at will. Potence is here taken in a wide sense for any influence whatever, which any being is capable of exercising within itself or over another. Now, wherever there is freedom there must be will; and where there is will there must be intelligence. Thus power necessarily involves the will and the understanding.¹³

Hence, if we are to develop the theory of mind from a single principle, that principle must be power; since power implies in itself freedom, and freedom will, and will understanding. Power is that plenary, all-comprehensive *proprium*, which must be acknowledged to be the essential difference of mind. Intelligence implies internal, but not external, acts of will and power; and will, in like manner, of power. Intelligence and will are, consequently, primary and essential, but not all-embracing, *propria* of mind. Power is manifestly co-ordinate at least with the other two.¹⁴

The philosophy of the mind, therefore, naturally divides itself into three parts, treating of the understanding, the will, and the power; or the intellectual, moral, and active faculties. These epithets are adopted as the most familiar. They are given on the principle that the higher function is entitled to determine the name. Rational, noetic, and thinking, serve also to characterise the first; emotive, propensive, and willing, may suit the second; and potential, practical, and doing, may be applied to the third. The understanding involves less, and is therefore in some respects simpler than the will, and the will than

the power. In the order of thought, also, understanding falls to be considered first, and power last.

Faculty is the ability of the mind to behave in a certain way, either within itself or towards anything else. It displays itself in voluntary, and therefore conscious acts. Hence it is obvious that the faculties are as numerous as the forms of activity we discover in the mind. Capacity is the liability of the mind to be affected by other things.

The chief departments of the intellectual faculty are knowing and conceiving; or, more fully, observation, memory, imagination, judgment, and reasoning. Among objects known or contemplated by these faculties are—whole, part, number, space, time, motion, existence, thing; matter, its kinds and qualities; mind, and its properties; object, subject, effect, cause, creature, Creator; relation, and consequence. The end of intellectual activity is science or philosophy, in the most comprehensive sense, which has two great spheres—the physical and the ethical; or, more generally, the material and the mental. Mental philosophy comprises the sciences of the intellect, the will, and the power; and hence is divided into intellectual, moral, and potential philosophy.¹⁵

The principal branches of the propulsive faculty are estimation, inclination, and volition. The objects with which they are most conversant are—good and evil, right and wrong, want, wish, end, and means. The great end of volitional determination is duty, the science of which is called ethics.

The main functions of the potential faculty, besides thinking and willing, are moving, acting, and speaking. The objects with which they have most concern are—

cause, effect, causer, potent, agent, impact, resistance, action, habit. The end of potential effort is effect; the science may be called practic.

Besides the faculties are the unconscious and involuntary potences of mind, by which it assimilates food, grows organs, and performs the various functions of life.

In addition to all these are to be noted its capacities of being affected by external objects. Under this head come sensibility, susceptibility, and affectibility, which correspond with the three faculties of understanding, will, and power.

PART I.

THE UNDERSTANDING.

THE understanding, taken in the most comprehensive sense, is the faculty of knowing and conceiving. It includes understanding proper,¹⁶ the apprehending or empirical faculty; reason, the intuitive faculty; and imagination, the conceptive faculty. By it we observe, remember, know, imagine, judge, and reason. We observe, when we feel, discern, perceive, or are conscious of anything. We imagine, when we conceive or construct. Hence the chief branches of the intellectual faculty are—sensation, intuition, perception, consciousness; memory, knowledge; imagination, judgment, reasoning, and method. Before these must be placed the intellectual capacity, that is, the sensibility. By sensation, intuition, perception, consciousness, and memory, we make and keep up our acquaintance with the world of things; by imagination, we contemplate and combine things conceivable, whether they have a place in the real world or not; by judgment, we apprehend the relations of things, real or problematical; and by reasoning we arrive at conclusions. In sensation, intuition, perception, consciousness, and judgment, the understanding is nearly alone; in memory, the will comes into play; in imagination, reasoning, and method, we verge on the

peculiar field of power ; in sense, we are aware of effects ; in intuition, we descry causes, qualities, relations ; in perception, we take note of external things ; in consciousness, we are cognisant of ourselves and our movements, the internal things ; in imagination, we conceive all manner of things ; in judgment, we apprehend relations ; in reasoning, we arrive at consequences ; in method, we are concerned with the system of nature and art.

To complete the sources of our knowledge of things, we must add opinion and faith. Opinion is the presumption or persuasion of that which has not been observed, or is not open to observation. It may rise by experience to theory, conviction, or even certainty.

Faith is reliance on the testimony of others. It often reaches to full assurance. By faith we avail ourselves of the experience of others in addition to our own. Most of what we know is due to this source.

CHAPTER I.

SENSE.

Sensibility is the capacity of the mind to feel certain effects of other things on the organs or nerves of sense. The term is intended to express the passive side of sensation. To make the matter plain, let us premise that the mind is affected in a threefold way by an external thing—sensibly, emotionally, and physically ; in any one of which it may be said to feel. In the first it feels intelligently, or looks out at the effect ; in the second it feels susceptibly, or receives the pleasure or pain of the effect ;

in the third it feels physically, or merely bears the effect of the external thing. Now the third of these is due to the affectibility of the mind, so to speak; the second to the susceptibility; and the first to the sensibility.

Sensitivity, or sense, is the active side of this mental power. He who feels is the sentient; the act of feeling is properly called a sensation, though sensation is also applied to the faculty. Sense is in popular style usually confounded with perception; and it might have remained so, had not our proneness to abstract at length brought out the distinction. A sensation, strictly so called, is the feeling in the mind of the effect of some external thing on the organ of sense. In this way the mind comes into contact with the external world, which consists of the material and the vital.

The primitive elements of the mental process are so interwoven with one another, that it is impossible to treat of one, and especially of the earliest and simplest, without anticipating much of what is proper to others. Hence, in unfolding the nature of sensation, we are compelled to pre-suppose a good deal that is involved in or acquired from other sources, such as intuition, perception, consciousness, memory, and abstraction.

The first fact that meets us here, at the very entrance of our inquiry, is that the material and the vital kingdoms have certain potences, to which correspond certain capacities of the mind. Hence the material and the vital affect the mind each in its own way. On the other hand, the mind has certain powers of moving the organs of the body, and so affecting, in a variety of ways, those external things that have the corresponding capacities. Thus a correspondence, a sympathy, a unity, is

established in the world of things. Man indeed is a microcosm, a minor unity in himself. His body consists of matter, and therefore has its ordinary sensible qualities. The vital potences also belong to him. These potences stand on the border-ground between merely material forces, and the powers which characterise spirit. They display themselves in the vegetable and animal orders of organic life, which form the marvellous chain of intermediate links between the mineral and the man. These potences belong indeed to man, as he is an animated being; but so far as they come under the eye of consciousness and the control of will, they are transformed into the free potences, which are the essential attributes of spirit. Reason emancipates and transcends, when it does not entirely supersede, instinct; elevates sensation into the higher range of perception; gives a true will, freed from all the relics of a physical bondage; and substitutes power proper for the brute force of the mere animal. Along with these potences of mind are found susceptibilities for certain of the forces of matter, when they affect the organs and nerves of sense. By means of these unnoticed go-betweens the human mind holds intercourse with the external world. And as spirit is able to put the bodily members in motion through the motor nerves, and by means of these members to move other bodies, and so affect the organs of another spirit, the communication of mind with mind is thus completed. Thus we have access to the whole external world.

So soon as we recognise the fact that the material object has forces to which respond certain sensibilities of mind, the mystery of the connexion of mind and matter is seen to be no greater than that of one portion

of matter and another. Certain affections of the several organs of sense, produced by the surrounding realities, beget corresponding sensations in the mind. A sensation from the material point of view is an affection of the mind by an external object through the medium of an organ of sense and its proper nerve. This establishes an actual connexion between the mind and the surrounding world. From the mental point of view, a sensation is a feeling in the mind of the peculiar effect or influence of something external on the organ of sense. This determines, as we shall see, the actual cognisance of matter by mind. The intercourse of mind with mind, or rather of man with man, is effected through the medium of matter.

Matter, as we have seen, appears in the solid, fluid, or gaseous state: and weight and heat are common to it in all these states. Solid matter, weight and heat, fluids and airs in motion, affect any part of the skin or surface of the body; fluid matter, the tongue; volatile matter, the nose; aerial matter, the ear; and light, the eye. The one word, which may be made to cover all these modes of organic affection by material force, is touch or contact. For every sense is a variety of touch. It is to be remembered, however, that touch does not mean actual knocking of rigid particles against one another, as is sometimes supposed, but only impulse or influence of force on force (p. 13). Let a force, then, have a range of assignable extent. A susceptible object will come into contact with it when it reaches the given distance from the point of issue. Those qualities which directly affect the mind through the senses may for convenience be called sensible; those which affect other

kinds of matter, so that these show a change in quality to the observer, may be contra-distinguished as experimental. Thus the light of the sun has the quality of bleaching linen, which we discover not in the light, but in the change of colour which the flax exhibits.

It is only necessary now to determine precisely what a sensation is, and what it imports. Here, however, we encounter the difficulty of indicating by words any simple thing or process. It cannot be explained by definition, or placed before the mind by description or illustration. It must be experienced to be thoroughly or properly known. A sensation, we may say, is the feeling existing in the mind itself of a certain effect of another thing from without, acting upon it through an organ and nerve of sense. This will serve to convey the nature of a sensation, but only to one who has already experienced the like. And when it is once expressed in words, we see what a marvellous process of abstraction has taken place in order to accomplish this end. *The feeling.* In this case the being intelligent, sensible. This is the genus to which it belongs. *Of an effect.* This is the essential difference of a sensation, by which it is distinguished from a conception or any other process of mind. Effect must here be taken in its proper and full sense, namely, an alteration made by an external cause. *A certain effect.* This particularises the kind of effect, and therefore of sensation. *Of another.* This signalises an essential character of the effect. It is felt to be not from the mind itself, but from another. This apprehension of otherhood, or diversity, is a radical element of the sensation. *From without.* The feeling that the source is external to the mind is equally essential to the

sensation. *Through an organ and nerve of sense.* This determines the channel through which the mind is affected, and in some degree the quarter from which the originating cause acts. The sensor nerves connect the organs of sense with the brain. If the nerve be affected at its extremity, the cause is external to the body. If at any intermediate point, the cause is within the body, but still external to the mind. The sensations in these two cases are quite definite and distinct in their character and in their origin. The same applies to the sensations from the different organs, as well as the various sensations coming by the same organ. The elements now enumerated—the feeling of a *certain effect* of *another* thing from *without* on the organs of sense—constitute the bare sensation. Of the three elements, the effect alone is apprehended by the sense, the otherhood and the externality of its cause by a quite different faculty, to be examined presently—namely, intuition. From all three we learn that a sensation is a look-out. This makes it the groundwork of a perception, which is a farther look-out.¹⁷

But the actual occurrence of a sensation imports much more than this. The sensation itself is but a fragment of a whole process, which the mature mind¹⁸ cannot refrain from accomplishing. *Existing.* This applies to the sensation itself, and to all that it involves. Whenever a sensation actually takes place, existence comes into view. This is the third intimation of the intuitive power. And existence is seen to belong not only to the sensation, but to the sensible effect and to the sentient mind. *Of another thing.* Effect and a thing that effects, intuition informs us, cannot be separated in the reality of things, though distinguished in the region of abstracts.

This thing is, therefore, a fourth lesson from intuition. Add these two elements to the sensation, and it rises to a *perception*. We are sensible of the effect; we perceive the efficient. *In the mind*. A sensation necessarily implies a sentient being, that is, in this case, a mind. *In* expresses the relation of internality; a fifth disclosure of the intuitive faculty. *Itself* brings out the selfhood of the mind, in contrast with the otherhood of that which affects it. Thus the relation of identity and diversity is completed by a sixth discovery of intuitive reason. Moreover the mind is conscious of itself and its sensation. Without this the sensation would shrink into the darkness of a mechanical or chemical change. These elements being added to the sensation, raise it to an act of self-consciousness. If now we combine the consciousness and the perception into one, we have the wondrous whole, of which the sensation is the central point.

By the clear glance of intuition we discern the qualities and relations of things, and by the keen edge of abstraction we take them asunder for consideration and description. Let us sum up once more the particulars which have now been brought into the field of view in the single act of sensation, when performed with the full intelligence of the mind. A sensation implies a *sentient mind*, apart from which it cannot take place. This brings into notice the principle of *necessity*. An actual sensation involves the *existence* of the sensation, the sensible effect and the sentient mind. The *effect* and the *cause* necessarily coexist. The *other* and the *self* constitute the relation of diversity and identity. The *external* implies the *internal*, and inversely; and both are *relations of place*. Both cause and effect imply substan-

tive things to which they appertain. We need not pursue the analysis into farther detail at present. When I contemplate this starting event in the history of the mind, I find that the sensation itself is but an abstract from a greater whole. By taking my stand on the wider range of observation, I become aware, in the very act of sensation, of myself, the sentient being, and of the external thing of which I am sensible, coexisting with the act which brings them into palpable connexion. Herein I have transcended the region of sense. I have ascended the lofty watch-tower of intelligent apprehension, where in the front I descry the thing that has come into sensible contact with my mind, and by a reflex glance I recognise myself the sentient and percipient spirit. Thus a sensation in man necessarily imports the existence of perception and consciousness, of a sentient, percipient, conscious person, and an actually observed and outwardly operating thing. The bare feeling is due to the sensitive faculty ; all that is implied in the feeling is due to the intuitive faculty, or reason proper ; and all that sensation farther imports in a rational subject beyond itself is due to perception and consciousness.

It will be more convenient to treat of the different senses when we come to perception.

CHAPTER II.

INTUITION.

Reason, strictly so called, is the faculty of first principles or self-evident truths. It is the highest form of the intellect. It is one of the triad—observation, reason,

imagination. The understanding proper apprehends what is; on the occasion of sensation reason describes what must be, and thereby gives to the understanding its full compass; and imagination contemplates what may or might be or not be. The first refers to that which is known *a posteriori*; the second to that which is known *a priori*; the third to that which is conceived, whether known or unknown.

Intuition is the function of pure reason, by which we come to know all that is implied in a sensation or any other part of our experience. Besides and beyond the bare sensation or other experience, are implied existence, quality, relation, and the like. The first is due to the sensitive or other apprehensive faculty of the mind that may be called into exercise. But the existence, quality, or relation implied in the mental experience is disclosed to the intuition in the course of the familiar process of abstraction.¹⁹

Intuition and abstraction go hand in hand, and mutually imply each other; though the abstract may be an object either of intuition or of the outer or inner sense. Things come before us in the concrete. When a sensation takes place, abstraction immediately sets to work, and draws out for special attention and use in conversation and business the various particulars involved in the act, such as the sensation proper, existence, influence, identity and diversity, outward and inward, place, causation, necessity. And so in other mental acts. But the very drawing of them out implies the finding of them in. The singling out for inspection involves the describing of that which is singled out. And the spying out of a thing implied is in itself a singling of it out from the

other objects with which it is accompanied. Thus it is manifest that abstraction implies intuition, and the reverse. And it is obvious that abstraction distinguishes the objects of the apprehensive, as well as of the intuitive faculty.

Intuition takes cognisance of the properties of things, and the vast multitude of relations and conditions which they involve. These are not of themselves open to the sensitivity, which is the seat of feeling only, but are discoverable solely by the light of reason. The latent power of intuition, like that of sensation itself, lies in the infant mind, awaiting the occasion for its development; and no one can venture to say how late or how early its unconscious, or rather unnoticed, operation begins. It must certainly be very soon, since perception involves much of the knowledge thereby acquired. The faculty comes into the world with us in company with all the others, and does not long lie idle or wholly unobserved.

We have already learned that in the very first sensation the understanding proper, or empirical faculty, and the reason proper, or intuitive faculty, necessarily concur, the sensitivity contributing one part—the effect felt—and the intuition furnishing two others—the diversity and externality of its cause. But the mind cannot pause here; the understanding adding the consciousness of the sensation, and of the sentient mind, and the reason the cognisance of cause, quality, thing, existence, necessity. This is a striking proof of the unity of the mind amid the versatility of its powers, and at the same time of the intimate and essential connexion of these faculties, which we are compelled for the sake of perspi-

cuity to consider apart. As sensation and intuition make their appearance on the mental stage hand-in-hand, so the understanding and the reason, the fountains of empirical and intuitive knowledge, are inseparable companions in the walks of philosophy. Every science must have its empirical facts, as well as its intuitive principles, if it is to construe to itself the nature of things.

It is now our business to give a brief list of the principal matters which we come to know by intuition. Having premised a few general principles, we shall confine ourselves at present to the *objects* which come under observation by means of this faculty. A list of the principal axioms or self-evident truths, due to the same source will be given under the head of judgment.

BEING implies on the one hand *quality* and *relation*, and on the other the ABSOLUTE. Quality involves SUBSTANCE. All the objects of thought included under these general terms come distinctly to the intuition in the process of abstraction, and are therefore inseparable in the nature of things. Mere being, that is, being apart from property or relation, is an impossibility.²⁰ So is property apart from being. So are substance and quality apart from each other, or from being. That which has no property, but only some relation, has but an unsubstantial existence. Thus space has no substantive being or property; it has only the relation of quantity in length, breadth, and thickness. But bare non-existence has not even a relation. Property is a convenient term to include substance and existence along with quality. But it cannot apply to a substance or a being, when a substantive or existing thing is meant, as this is not a property, but a holder of property. Being, on the other

hand, implies the ABSOLUTE. The Absolute is that which has being and all its essentials—substance, quality, and relation—aboriginally in itself, and therefore without derivation from any other. It is, therefore, independent and eternal. Now being from sheer non-being is plainly impossible. Hence it is evident that being here and now necessarily implies being from eternity, or an Absolute Being. We shall now consider in order quality, substance, relation, being, the Absolute, as the objects that come to be known by intuition in sensation.

I. 1. QUALITY.—This is that *property* of anything, which is such as to affect or be affected in a particular way. It is either a *potency* or *capacity*, according as it produces or undergoes a change. Potency is either *force* or *power*. A change of quality involves *cause* and *effect*. A certain sensation, or other observed effect proves the force or power to be such as to produce, or the capacity such as to suffer the effect in question. Quality is the technical term generally used as the correlative of substance. It is in this sense the counterpart of substance. It obviously comes, not from sense, but from reason. It is discoverable by intuition from the sensation it produces in us, or from the sensible change it makes in other things or suffers from them.

2. *Property* is that which belongs to anything, and goes to constitute it what it is. All qualities may be termed properties, as they enter into the essence of that to which they belong. They are called qualities, as being of such a kind; properties, as belonging to a certain thing. Property, however, is more extensive than quality, as it includes substance, the counterpart of quality, and being, in the sense of existence. The accidents of

the species are among the properties of the individual. Property is sometimes used in a still wider sense, to include relation ; but it is not so applied here. In all its applications it comes to our knowledge, not by sense, but by intuition on the occasion of sensation or some other mental experience.

3. *Force* is a constant potency, by which a certain effect is invariably produced in given circumstances. The effect is either felt in the organ, or observed in the external object that has undergone a change ; the force from which it results is known by the intuitive power. When I feel, I feel some effect. It is plainly a potency that produces the effect. This potency, I learn from experience, is in this case constant. It has a law which it fulfils, not at will, but of necessity. This is what we call force in a very broad sense. The various forces belonging to all kinds of matter come to be known solely by the intuitive power of the mind on the occasion of sensation.

4. *Power* is free potency, or the ability to put forth energy at will, which is otherwise remitted. It therefore implies will and understanding, and belongs to spirit. It cannot be cognised by the sensibility or the consciousness. But when I am conscious of acting, I am at once aware, with all the certainty of intuition, of a power in myself to perform the act. When I see another acting or refraining from action at will, I instantly recognise a power in him corresponding to the act. Voluntary action is, therefore, an indication of power in man.

5. *Capacity* is the susceptibility of being affected by some force or power. This property comes to our know-

ledge, not by sense, but by intuition on being affected by any influence, or observing one thing affected by another.

6. *Cause and effect.*—A cause is any potency in action. It is ascribed to the person or thing in which the potency resides. But it is a loose way of speaking to say that the person or thing is itself the cause. The person or thing is the source from which the cause proceeds. The effect is the result produced by the cause; and this is either a new thing or a new state of things. In the agency of matter the result is simply a new state of things; in that of spirit it may be either.

Change is a unity, a single process, in which by abstraction we distinguish beginning and end, action and passion, cause and effect. Hence cause and effect are in their very nature inseparable. We cannot have a cause without an effect, nor an effect without a cause.

II. 7. *SUBSTANCE.*—This is taken here first in the sense of a property of things. It is a subsisting, a standing under or supporting of quality. A thing is a unity in this respect, an *ens*, in which a holding and being holden coexist. There cannot be holding without being holden, nor the reverse. In other words, substance and quality are complements of an indivisible whole, and imply each other.²¹ Substance is a step farther from sense than quality. A sensation implies quality; quality, substance.

A substance, however, is a concrete thing, having substance, quality, and relation. It would have been convenient if a different form, say substant, had been used here. We know only two kinds of substances in this sense—vital and material. The vital includes the spiritual.

They are distinguished by the fundamental quality, or essential difference of each. The essence of a spiritual substance is power, involving will and understanding ; that of a material substance is force, involving need and law. A most interesting link between these two is found in animals and plants. These are the vital substances, whose essence is life.

III. 8. RELATION.—This means any bearing of an object of thought either in itself or on another. It is not a property that goes to constitute a reality. It is merely a particular bearing of anything real or ideal. Hence there may be relation, where there is or can be no reality ; and relations may be traced between mere objects of imagination. Familiar relations are identity, diversity, likeness, analogy. Others will occur hereafter. Within the range of relation, quantity and mode need to be signalised.

9. *Quantity*.—Under this head come length, breadth, thickness, place, figure, space, whole, part, the absolute, the finite, number, measure, ratio, proportion, continuity, separation, externality, objectivity, and others. Length is merely the distance between two points, without involving breadth or thickness. Breadth is the interval between two opposite edges of a surface, and therefore implies length, but not thickness. Thickness is the interval between two opposite sides of a solid, and therefore implies length and breadth. Place is the distance in a given direction of a point from a given point in a given line, or from two given points in a given surface, or from three given points in space. Figure is the boundary of a surface or a solid. Space is mere extension in all the three dimensions. It is not properly the

illimitable void, as it may or may not be occupied. Still it is nothing in itself but room for things. A whole is that which is one or regarded as one. Part is its correlative. All the parts make up the whole. The absolute in this sense is a whole complete in itself, to which nothing can be added. The finite is that which is limited. The infinite is that which is unlimited. A thing can be infinite only in some respects, while in other respects it is finite. Thus a mathematical series may be infinite in the number of its terms, while it is finite in every other respect. Every infinite is in the same respect absolute, as nothing of the same kind can be added to it. But some absolutes are finite, and others infinite. Finitude belongs to a part of space, and infinity to the whole. Space is, therefore, both absolute and infinite. Number is a multiple of a unit. Measure is a standard of quantity. Ratio is the relation of one magnitude to another. Proportion is equality of ratio. Objectivity and subjectivity are species of outness and inness, where I am myself within, and all else is without.

10. *Mode*.—This means the manner of being or happening. It includes necessity, impossibility, possibility, contingency, bondage, freedom, condition, dependence, independence, and other relations of a similar kind.

It is antecedently evident that a relation cannot be an object of sense. By its very nature it is some bearing which belongs to a thing, and not any act or influence of it. But the latter alone can be the cause of a sensation. Such bearings of things, therefore, are open to the intuitive faculty alone. Externality is a relation which enters into the very simplest sensation, and yet it is not and cannot be due to the sensibility. Length and the

other kinds of quantity may belong to the objects of sense, and are observed on the occasion of sensations received therefrom. But they are not due to the sense in its strict meaning, but to that intuition which invariably accompanies it. The various modes of being in like manner enter, not at the door of sense, but at the avenue of reason.

IV. 11. BEING.—Being is used to denote either an abstract property of things or a concrete thing really existing. In the sense of a property of things it necessarily belongs to every sensation, to the effect felt, the mind that feels it, the quality causing it, and the thing in which this quality subsists. It is, 1, *Reality*, existence in the full and proper sense ; and to be is to have reality. Here being necessarily involves quality, then substance, and farther, a subsistent or substantive being, with definite qualities. Being cannot want quality, nor quality being. *Actuality* may be distinguished from reality ; as the former applies properly to events, the latter to states of things. The term being, however, is used in at least two or three other important meanings. 2, *Nature*. This corresponds nearly with *essence*. To be is here to be in kind, to have a certain quality ; as, man is an animal ; John is just. The old English verb, *kythe*, has nearly this meaning. The substantive verb is in this case the logical copula. 3, *Relation* or *condition*. Here to be is to be relatively ; as, the way is long. This sort of being may belong to that which has no reality, as space or time. 4, *Representation*. Here to be is to represent or be represented by ; as, this (chart) is China ; that (painting) is Wellington ; man is a fading flower. This is confined to the verb to be.

In the sense of a concrete existing thing a being is that which is, and therefore has substance, quality, and relation. The quality affects the sense, and is thereupon discerned by the intuitive faculty. The substance is implied in the quality. And many relations, such as otherhood, place, and necessity, are involved in the perception of it. In this sense a being is an existing person or thing, according as intelligence and will are present or absent; it is living or inert, as life is present or absent; it is spirit or matter, according as the pregnant quality of power is present or absent; and it is Creator or creature, according as it has absolutely given or received existence.

Being in all these varieties of meaning is cognisable, not at all by pure sense, but only by the intuitive faculty on the occasion of sensation or some other exercise of mind.

12. *Thing* is that which has substance and quality, but not reason. It is often, however, used in ordinary converse with a latitude of meaning that includes every conceivable object of thought. It is in this respect more extensive than being, inasmuch as it is applied to objects of the imagination, which have no real existence. Thing, involving substance and quality with relation, comes only by the intuitive, along with the sensitive faculty.

13. *Person* is a rational being, opposed to thing, which is, strictly speaking, confined to irrational beings. This is given, not directly by sense, but by consciousness or reason, on the occurrence of sensation or some other process of mind. It is placed here because the exercise of intuition is required to complete the cognition of this and every other concrete being.

14. *Life*.—The vital is distinguished from the merely inert, which is destitute of life. It contains three very comprehensive species—plant, animal, and man. The vital principle discovers itself in the plant as growth or organic development, and its accompanying processes; in the animal as instinct and motivity, with growth; in man as reason, will, and power, with growth and some measure of instinct. All these objects of knowledge are reached by intuition.

15. *Matter*, as we have already seen, is the seat of force, a substance whose qualities are potences or capacities determined by standing law. It becomes known by perception, which involves the exercise of intuition.

16. *Spirit* is the counterpart of matter. It is the seat of power, a substance whose active qualities are faculties, freely exercised under the direction of an intelligent will. The spirit of man is self-conscious, and so knows itself by consciousness, and other spirits by perception, in both of which faculties intuition, as we shall see, plays an essential part.

V. 17. *The Absolute*.—The Absolute is that which has being in itself, and is not dependent on any other being. It is, therefore, eternal and indestructible. It has not been called into being, and it cannot cease to be. On the postulate of being, the Absolute must inevitably be. If anything be, something must always have been: for from mere nothing, nothing can come. This is a pure dictate of intuition on the occasion of mental action.

18. *The dependent* is the counterpart of the Absolute. But neither being nor the Absolute necessarily implies the dependent. For the coming of a dependent being into existence requires an act of power, and therefore

demands will and intelligence in the Absolute. Hence the Absolute, if devoid of reason, will, and power, would be for ever without a dependent; and if possessed of these attributes, would remain without a dependent until it pleased Him to will.

19. *The Omnipotent*.—Potence comes by intuition; and the potent by consciousness, perception, or reasoning. The idea of the Omnipotent is only a farther stretch of intuition or imagination. On the postulate of dependent being, the Omnipotent must so far be conceded. The dependent being is the *creature*, a substantive being, whose existence, and therefore subsistence and qualities, are derived from another.

20. *The Creator*.—This is He who gives being, subsistence, and quality to everything else that exists. He is distinguished by the attributes of reason, will, and power: for it is manifest that matter, being a seat of force, determined by a standing law to a certain course of action and reaction, cannot originate anything new. He must exist and subsist in Himself, and therefore without beginning: for it is manifest that a being deriving existence and subsistence from another is only a creature. Lastly, He must be absolute in reason, will, and power, in order to design, will, and create dependent beings. The existence of a creature necessarily involves that of the Creator.

We are acquainted with many creatures. But it will not be asserted that we know them to be creatures by the faculty of sensation. Neither will it be for a moment supposed that we arrive at the knowledge of the Creator by mere sense. Wherever, indeed, in the above list we have passed from the property or the relation to the con-

crete thing or person, we have risen by intuition from the region of bare sensation to that of perception or consciousness, which includes the finding of the outer or inner sense, as well as that of the intuitive faculty. And it is manifest, we conceive, that we may and do in some degree know the Creator by a higher kind of perception, through an ultimate step of intuition. To this, however, is to be added a vast body of cumulative evidence for the existence of the Creator.

It is farther to be remembered that the objects of intuition are such as could not be discovered at all by a faculty of mere sensation. If they had not come by another avenue, they could not have been known at all.

Several of the proper objects of intuition are inseparably connected with every sensation; as, existence, otherness, outness, cause, necessity; and, farther, quality and substance. In the very essence of an actual sensation are implied its existence and the diversity and externality of its source. These objects of intuitive reason are as clear and certain to us as the sensation which they accompany. We are thus introduced to existence on the very threshold of our acquaintance with the outer world: and as long as sense remains, we find ourselves intimate with a continuous series of existing sensations. The concurrent fact of the *cause* of the sensation being *other* than the mind, and *external* to it, and *existing* in *necessary* connexion with the *effect* on the sentient principle, leads to the cognisance of the external sphere of things, and involves the definite knowledge of objective reality. In the accompanying consciousness, too, the identical comes to view with the different, the internal with the external, the subjective with the objec-

tive; and so we are landed on the *terra firma* of the internal and external world of existence. The certainty with which we take cognisance of the objects of intuitive observation is at least as clear, and often clearer, than that of the mere sensation, which has introduced them to our acquaintance. In this, however, we are anticipating.²²

CHAPTER III.

PERCEPTION.—I. THE PERCEPTIVE PROCESS.

Perception, or properly perceptivity, is the faculty by which we perceive external objects. A perception is a taking notice of anything through the senses. That which is perceived is called the percept, object, or thing perceived. As the perceptive process appears before the consciousness, it may be described in such phrases as these—I see a mountain; I hear a cataract; I smell a rose; I perceive a man. This process is really simple. Here, indeed, we have the objective whole, of which sensation is merely an abstract part. The perception comes to view, as a distinct and complete act, sometimes before the sensation, which is then severed from it by the process of abstraction. The percept is a concrete thing, taken in at a single glance. As it stands in the nature of things, it is not really separable into being, substance, quality, relation. These are only mentally distinguishable, and are not at all distinguished in the first instance. They only come out afterwards by a feat of abstraction. The object of perception may at the first be very defectively, though quite distinctly, appre-

hended by the mind. It comes as a stranger to the infant mind, and it may be by one sense only, and therefore wants as yet that fulness which experience by other senses and in new aspects can add to its observable nature. But still it comes as a whole, and involves implicitly, if not yet explicitly, a thing now perceived by the sense, other than self, external, substantive, so and so qualified and related, and existing. On consideration it will be found that not one of these conditions can be wanting in the full and proper object of perception. The direct and full and proper percept, then, is a thing; and this object may be either extremely simple or amazingly complex. For example, the four objects already mentioned—a mountain, a cataract, a rose, and a man—may be formed into one scene, and contemplated at a single glance. Before passing from this full object of perception, let us give heed to two things: first, its indispensable ground; and second, its proper content. Its indispensable ground is a sensation. Without this there is no perception. And this is what distinguishes a perception from all other ways of knowledge. Its proper content is a thing now existing other than the mind and outside. *Now.* This distinguishes it from an object of memory. *Existing.* This distinguishes it from a bare concept of the imagination. *Other than the mind.* This distinguishes it from self. *Outside,* and hence not an object of consciousness. Perception ascertains present existence at the moment and in the act, and as long as the process continues.

We cannot affirm, however, that this full form of the percept always comes first. If I be impressed in early age with a striking quality, as a bright colour, I may

consider it apart from the thing to which it belongs. At all events, in after experience I may have occasion to say, That mountain is *green*; I hear the *murmur*; I smell a pleasant *odour*; I perceive the man *standing*. I am now regarding the mere quality or relation, leaving out of view for the time the thing to which it must belong. I find myself engaged in a process of abstraction. The concrete thing is no longer before me, but only the quality by which it affects my sense. The process of abstraction is one of the earliest, easiest, and most constant habits of the mind. But, while I concentrate my attention on the quality, I still regard it as properly a quality, and therefore implying a thing having substantive existence to which it belongs. Quality is merely a suchness, and necessarily requires a thing that is such. This brings out into intuition that property of a thing by which it sustains quality. This very abstract property is called substance, which is accordingly the counterpart of quality. Thus the mere turning of attention to standing, apart from the man who stands, brings out into view the property he has of being the subject of posture, or any other relation or quality. Thus in a percept I now discern existence, quality, substance, diversity, outwardness.

Again, on feeling a pain in my toe I perceive this member to be a part of my body. And as pains may occur in any part of my body in which there are sensor nerves, I soon become acquainted with the interior of my organic frame. And as the whole skin is an organ of touch, I am made aware of the exact contour of my whole body. I thus come to perceive my body as a material organ, existing, different from and external²³ to my pro-

per self, affecting me and affected by me. The painful or pleasurable feelings which it produces are located by me in the parts affected, and felt there ; and I am aware of the dimensions and figure, and other relations, as well as the various qualities of my body. In all this I am in the region of perception, the world existing outside myself.

If, however, I distinguish from the quality affecting my sense the sensation which it begets in me, I find I have parted company with perception. I have cut off the external cause as far as possible from my contemplation, and turned my eye inward on the bare sensation. In so doing, I have passed from the region of perception to that of consciousness ; for I am no longer looking at a thing affecting me from without, but at the affection, which is an affair in the field of the mind. The sensation itself is due to the sensibility. The apprehension of it as existing in the mind is due to consciousness. The apprehension of the thing so affecting the sense as existing outside the mind is the act of perception. The apprehension of the quality or potence of the thing to affect me seems to be the sensation of Locke. It is an act of intuition, or an abstract of perception. But, as we have already seen, it belongs to the very essence of a sensation to feel the *effect* of an *influence* from without, *by* which it comes to *be*, and without which it *could not* be. Thus in sensation itself we find the mind eminently intuitive and incipiently perceptive. It cannot withhold itself from perceiving a thing producing the effect it feels.

It is eminently intuitive. When I abstract from a thing perceived, as from a sensation, I must know what

I abstract. The faculty by which I know this I call the intuitive faculty. But from a sensation I abstract difference, outwardness, existence; and from a perception quality, substance, necessity. It is evident that not one of these is felt by the sensitivity, strictly so called. I apprehend them by that intuition which is developed at the same time with abstraction. And I apprehend with equal evidence that these properties of a thing observed, though distinguished in thought, are inseparable in reality.

It is incipiently perceptive. The apprehension of an external thing with a certain quality now affecting the organs of sense is the whole of what is included in perception. When I see a tree, I take note of an object having colour, height, breadth, thickness, place, figure, as well as existence and subsistence. When I handle it at the same time I perceive hardness, roughness, and temperature, along with other qualities and relations. All these are the inseparable concomitants of sensation, while they are constituents of perception.

The relative parts taken by sensitivity, intuition, perception, and consciousness will now be obvious. The bare effect on the organ belongs to sensation. The difference, externality, existence, causality, and necessity, involved in the sensation and evolved by abstraction, become known by intuition. The cognisance of a thing so affecting the organs of sense is the part of the perceptive faculty. The cognisance of the sensation and of the mind in which it exists is due to consciousness.

At the first blush this may seem too abstruse and intricate an account of perception to be true to nature. Infants begin to perceive at a very early age, and it

appears to be a simple and easy process. The process is indeed simple, and performed by the mind at a single glance. But the subtle distinctions of thing, being, substance, quality, relation, rise gradually before the intuitive reason, and come to be clearly distinguished by the equally early and familiar process of abstraction, and to have a settled and inalienable place in our mother tongue. And the mind in the act of perceiving stays not at the sensation, but rather starts from it, and instantly grasps the external reality in the very act of sensation, and grasps it all the more vividly and definitely the more distinct and varied the sensations produced. These sensations, indeed, though they form the real and indispensable ground of the perception, yet fall into the background, while the mind, overleaping the intervening space, however great, stands face to face with the real thing, characterised by the qualities affecting it from without.

It is well known to the physiologist that a physical process of some length takes place in every instance of sensation. The sensation is of an effect. We know intuitively that every effect must have a cause. The effect is on the organ of sense. The mind feels, let us suppose, through the nerve of sense. The nerve is affected at the organ to which it belongs. The organ is affected by the external force or power that has come into conditions of activity. There may be another link between the influence affecting the organ, and the ultimate object of sense. In the peculiar case of hearing, the thrill of air mediates between the ear and the sounding object. Here there is a continuous chain of cause and effect between the external thing and the internal

mind, which is altogether unobserved in the act of perceiving. It forms a part, not of psychology, but of physiology. The sentient mind knows not of brain or nerve. It feels at the organ of sense, so far as the sensation is traceable to the body. But perception transcends this boundary. In some of its phases the mind seems to reach beyond the body, and locate the object at its estimated, if not its actual distance. This is pre-eminently the case in vision, in which the organ does not come into account, except from the exigencies of its movement, or the sense of weariness or pain; and these are rather in the region around than in the organ itself. The mind sees the object in external space in its local relation to the surrounding scene. Such is the wonderful structure of the body, and such the marvellous adaptation of the living organ to give scope and play to the various functions of the mind.

If it be asked now, can anything, whether matter or mind, act on mind? I answer—first, that I am not concerned with the possibility: I have met with the fact. And next, I find that matter is a seat of force and capacity, and that mind is a seat of power and susceptibility to force and power; and so either may act on the other as readily as one kind of matter may act on another. If I am further pressed with the question, how can one particle of matter act on another? I admit that I should be unable to conceive the possibility or explain the manner of two molecules or masses affecting each other if they were eternally and absolutely independent. But if one be dependent for existence on the other, or if both be dependent on an absolutely independent third, or rather first potentate, I can see the possibility, though I

may not be able to show the mode, of their mutual action. Meanwhile the fact is proved by thousands of undeniable instances; and the mode is not less explicable than that of a thousand others, which are familiarly known and freely acknowledged, though we cannot fully explain them. At the same time, the knowledge that a particle of matter is a seat of force, and a spirit a seat of power, while there is in each a susceptibility to external impressions, goes far to remove any inconceivability of their interaction.

If it be impossible for two absolutely independent beings to affect each other, it follows that if one being affect another, the latter must depend on the former, or both must depend for existence on a common cause—namely, the action of an Omnipotent Creator. At all events, those who start the difficulty, and at the same time encounter the stubborn fact, must grant the dependence of mutually-affecting beings on a first cause proceeding from an Eternal Creator. We have already seen, from the nature of matter, that it cannot originate anything, while spirit may. Hence we perceive that there must be an Absolute Originator, who must be a spirit.

It is to be observed that the effect in every single case has its own peculiarity, and hence in the concomitant perception the individual character or quality of the efficient presents itself to the mind. The action of this quality of the percept is a cause adequate and suitable to the effect. If the object affects the sense in more ways than one, I have so much the more direct acquaintance with it. If it affects more senses than one, my knowledge of the thing approaches still more nearly to a full apprehension of its character. Perception is thus

the observation of a thing by those qualities of it which affect the organs of sense.

It may be said that the inexperienced observer cannot immediately distinguish a power from a force, inasmuch as the one differs from the other merely by the freedom or fixedness with which it acts. This must be in some respect admitted. We observe the potency; but we may not at the moment discern in some cases, whether it springs from choice or necessity. If, however, in the course of events I come to learn that it is exerted and remitted at will, I have become acquainted with another mind. If it be put forth by something acting only according to a law which it cannot control but must only obey, I have come in contact with a material thing. Antecedent to experience, however, there may be nothing to incline me decidedly to the latter more than to the former. If I had become aware of power in myself, I might not unnaturally presume the influence experienced to have come from a seat of power like myself. Subsequent examination or experience could alone determine whether that which affected my sense was body or spirit. Actual experience is sometimes said to testify to the existence of matter alone through the senses. But mere sensation of itself testifies neither to matter nor spirit: this is the proper function of perception. The body, limbs, features, gestures, and utterances of another man are perceived by me through the avenues of sense; and it is obvious that by these means I become familiar with his directly observable characteristics of mind as well as body. When we see eye to eye, speak face to face, or use any mutually intelligible gesture, mind has come into contact and converse with mind, through the medium

of mind-affected and mind-affecting organs. We cannot expect to observe man out of the body when he is actually in it.

If it be said that we know only certain qualities of external things that affect our senses, but we are not sure that we know all the qualities of anything or the thing in itself, this must be in some respects admitted. We may not know all the qualities of external things, for we are discovering new ones every day. This saying is so far a mere truism. It may be sometimes useful for the repression of boasting to remark that we may not know all the qualities of anything. But it is sometimes abused, to disturb certainty and depreciate the senses. It is a matter of mere speculation whether we could have other senses in addition to those we already possess; or, if we had, whether the objects around us have any other qualities which might affect such additional senses. But it is worse than useless to entertain such a question for a moment. In other respects the above assertion may be fairly questioned. It is to be remembered that by mere sense we know no more of the qualities than of the thing itself. It is only by intuition that we discern the quality; only by perception that we observe the thing so qualified in and through the sensation. We do actually perceive certain qualities of objects clearly and distinctly; and we perceive the things themselves so qualified with equal certainty. So far, then, our knowledge is definite and certain, and it is a knowledge through the senses. And if we set aside the few cases in which we have for a time misinterpreted the senses, the whole circle of the sciences has never falsified or modified a single jot of their proper evidence. I see

colours now, amid the gathered illumination of a philosophy six thousand years old, not a whit more or less distinctly than Adam, when the visual ray first struck his eye.

The thing *out of itself*, that is, from the outside, is not less clear to me than the qualities it possesses ; inasmuch as both enter into my experience by the same intuitive glance. I cannot know it to be more or less than a thing having certain qualities, potences, or capacities, by which it acts, affects, or is affected by other things. Without such it is nothing ; and with these it is all that it is out of itself. If I discover any of these potences or capacities, immediately or mediately, I am so far in the way to a full knowledge of the thing outside of itself. Will it be said, You see only effects ; their causes elude your view ? If this mean that in sensation I feel the effect, not the cause, how could it possibly be otherwise, unless the cause were in the thing affected and the effect in the thing affecting ? If I am the passive recipient, I must in the nature of things feel the effect. But there is another case. If I am the agent, I am conscious of the cause, which is then in myself. These two cases evidently match one another, and show that I am aware of the cause or of the effect precisely when I ought to be. And if I am aware of either, I am intuitively certain of the other. So much for the cases in which I am a party. There is a third case, that of two external things interacting. In any change the effect is the consequent state of things. Now, the proper counterpart of this is the antecedent state of things. The antecedent consists of a thing or things with certain potences and capacities, and the conse-

quent of certain things with other potences to affect the sense. If in a wide sense the antecedent be the cause, then both cause and effect are equally obvious to the perceptive faculty. I observe equally well the oxygen and the hydrogen before, and the water after, the electric spark has passed through. But if in a strict sense the potency in the antecedent be the cause, and the new potence to affect my sense in the consequent, be the effect, they are both only and equally open to the intuitive faculty. And now, to return to the case of sensation, which is that chiefly contemplated, we have only to distinguish. The effect is felt by the sensitive faculty; the cause is described by the intuitive. The two cannot be separated: in perception they are viewed in their native union. The latter is as clearly seen as the former, often, indeed, far more clearly seen by the young mind, intensely delighted with the outward reality, and quite regardless of the inward effect. Hence it is plain that in every instance of perception I directly observe, not the effect, but the cause of an effect, which comes under the eye of the sensitivity; and when I indirectly observe external effects, I am equally capable of observing their causes. It is true that antecedent to experience I cannot tell the cause of a given effect; but neither can I tell beforehand the effect of a given cause. And even with experience it takes some care to pick out of all the antecedent circumstances what constitute the proper cause of a given effect. But this does not arise from any defect in the perceptive faculty, but from the difficulty of isolating a particular cause and effect from the concatenation of causes and effects which intermingle in the world of perpetual change.

The thing *in itself*, if we are to take this phrase in a strict sense, is not open to perception, simply because I, the perceiver, stand outside. I see the thing then, obviously, as it is to an outsider. To see it in any other way in my position is merely impossible, and to expect to do so is but a delusion. If I were myself the thing, I should, being intelligent, be reasonably expected to see the inner works and springs, to know the thing in itself, not, however, by perception, but by consciousness. If I had made the thing, I should so far know it in itself, because I had given it its internal structure, as well as its outward form and operation. But then I should know it not by perception so much as by memory. If I could be within as well as without it, I should then know it in itself and out of itself, and so have a perfect knowledge of it in every respect. But such knowledge is inaccessible to me. It can only be open to the Omniscient and Omnipotent Maker. Our very ignorance of things in themselves is a positive proof that we have not made them.

It has been stated in the same line of thought that human knowledge is relative. This is no doubt in some sense to be admitted. But we must beware of allowing this circumstance to detract from its reality or certainty. When I have a sensation, and thereupon perceive an object existing external to my sense, and displaying certain properties and relations, which I descry by intuition and distinguish by abstraction, you may fairly call the knowledge relative, namely, to the extent of my faculties and the opportunities of my position. But first, we remark, all knowledge, short of omniscience, may be called relative in the same sense.

And next, human knowledge is clear, distinct, and adequate, as far as it goes, and therefore thoroughly trustworthy. And lastly, if we be true to ourselves, we may ascertain some very definite landmarks between that which may be known and that which is beyond the reach of our present powers of observation. Hence our knowledge is limited indeed; but it is not therefore inaccurate or at variance with the nature of things, and it is far from having reached the range which is possible to our intellectual powers.²⁴

It is proper to add that the intuitive faculty does not stop at a dependent substance. As the sensible effect necessarily involves the quality causing it, and the quality the substance in which it inheres; so the dependent being necessarily implies the Absolute Being, from whom it derives its existence. Whenever, therefore, we are enabled to ascertain the dependent, we do, without any process of reasoning, merely by a higher kind of perception, arrive at the knowledge of the Absolute and Eternal Author of all dependent being. Now whatsoever might not be, without involving any impossibility, must be dependent. But matter, myself, and all other finite spirits known to me, are things that might not be, and are therefore dependent. And the dependent implies the independent, as necessarily as the effect the cause or the quality the thing. Now, since beyond the sensible effect I descry the quality, whose energy is the cause, and beyond the quality the substance qualified, I only take the third step when, beyond the dependent thing, I descry the Independent Being to whom it owes its existence.

II.—THE SENSIBLE QUALITIES.

Certain qualities of matter are perceived directly through the senses by the power of intuition. These are the forces which make themselves felt by the sensibility. On feeling the effect, the mind by its intuitive power apprehends the forces, the action of which has been the cause of the sensation. The forces with which we become acquainted in this way are called sensible qualities. The senses may fairly be regarded as five in all, since the organs are five. They are those of touch, taste, smell, sound, and sight. The organs of sense are here used to denote the receptacles of those effects of external things that give rise, not only to the sensations in their crude state, but to the perceptions of things in their full concrete form. The senses are the special powers included in the sensibility, or general faculty of sense. The term sense, as well as perception, is often used to denote the perceptive faculty. The percepts or objects of perception are in this case the sum total of the information we receive through the senses. They are external things with all their known properties and relations.

TOUCH.

The organ of touch is the whole surface of the body, but especially the hand. The surface includes the skin and the muscles underneath. The nerves, the tips of which are spread over this surface, capacitate it to be an organ of touch. When anything from without affects this highly sensitive surface, the mind through the nerves of sensation becomes aware of the effect, and understands

and interprets it for itself. It locates the effect at the precise point where it actually takes place. The effect is twofold, being either impulse or heat. The latter may be either conveyed by a hot medium (as air, water), or a solid substance, or radiated from a centre of heat. The effect on the organ of touch has more of the physical or purely forcible than on that of any other sense. The pleasant or painful is not specially prominent except in extreme cases. The intellectual, however, is well developed on account of the relations of quantity which come into view. Among the properties and relations that come by touch are force in many of its forms, pressure, resistance, weight, cohesion, repulsion, toughness, elasticity impenetrability, solidity, fluidity, volatility, heat; relation, especially that of quantity; whole, part, number, length, breadth, thickness, solidity (geometrical), figure, place, motion and rest, inertness, extension, divisibility, and degree. From spirit we ultimately get power in various forms. Of the percepts here enumerated, only force and power, and such as involve these, are real properties, having a hold on existence as the qualities of substantive beings. The others are not more than relations or circumstances that are incidental, some to matter and some to spirit. They are all discoverable by the perceptive power on the occasion of touch. By this sense, accordingly, we perceive not only solid, but also fluid and gaseous substances; and we take notice not only of pressure, but also of weight and heat.

The radical distinction between matter and spirit, as we have already seen, is, that matter is the seat of mere force and capacity, and spirit is the seat of power as well as of peculiar kinds of force and capacity. It

cannot be shown that matter has anything more to do with space than spirit has. Extension is not more akin to matter than to spirit, but rather less. For it appears highly probable, if not absolutely certain, that the ultimate monad of matter is a mathematical point or centre of manifold force, varying according to its kind. This monad, being a mere centre or origin of force, does not occupy space at all in the usual sense of this phrase. Most of these forms have a limited range in the contiguous space. One at least, weight, seems to be absolutely unlimited in range. We learn from experience that two particles of matter, placed at any assignable distance, say the radius of the greatest planetary orbit in the solar system, are drawn towards one another, and, if undisturbed, will meet at an intermediate point in the straight line joining their starting points. And we have no reason whatever for limiting the range of a radiating or linear force. Hence, for aught we know, and according to all we know, a single atom of matter has an attractive force which is sensible throughout infinite space. In this case the universe is dynamically, if not actually, infinite.

It is only, therefore, when we come to a mass of such force-bearing atoms in the consistency of a solid, fluid or gas, that we meet with extension, and are wont to speak of matter occupying a portion of space in a rough sense. But it is now agreed that these molecules in their closest embrace are not in absolute contact, but, on the contrary, stand at some distance, infinitesimal though it be, from one another. Now, a spirit is a seat of intelligent, voluntary, free potentiality, having perhaps its centre also, but not cohering with other spirits

in masses, like the ultimate particles of matter. Yet a single spirit in some way aggregates, regulates, and employs an organic body, which is a mass of matter occupying space. But though spirits do not in our experience crowd into compact masses, yet it is obvious that each has a place; and that a multitude of them, in a fair or an army, may be arranged within a yard, or less, of one another. An interval, however, keeps them asunder, and a less interval comes between the ultimate atoms of matter. They are therefore similarly related to space, the only difference being that a spiritual monad is in our experience surrounded with a larger space than a material atom. It is plain that space, being a mere relation, does not and cannot enter into the real essence of either.

The general properties of matter, as we have seen, are law, need, and force; of which force is the essence which involves the other two. The forces are various. They are at least as numerous in their kinds as the senses which they affect. But there is a multiplicity of species under each of these kinds in the wide-spreading abundance of nature. With respect to touch, the hand has only to come into contact with something external that we may become aware of energy or potency, in that comprehensive sense which includes force and power in exercise. Force may radiate from a centre, or act in straight or curve lines. Power is the only attribute of spirit perceptible by us through touch. But it is not by mere sense distinguishable from force, inasmuch as it comes to our notice through the intervention of matter. And even force comes under the direct cognisance of sense only in a few of its forms. Pressure and resistance are

related as action and reaction. Weight comes before the mind through touch, as a particular kind of press or pull. A weight laid on the hand is an instance of the former; a weight lifted by a handle, of the latter. Cohesion and repulsion go along with the chemical qualities of matter; yet they are thoroughly tangible. Hardness, roughness, elasticity, and a host of like qualities, with their opposites, are familiar to every-day experience. The molecules of matter may, by a cohesive affinity, be brought into a solid connexion. But there seems to be, in most cases, if not in all, a repulsive force operating at a short distance, which allows an infinitesimal nearness, but not actual coincidence, of the centres of force. This constitutes what is called the impenetrability of matter. Impenetrability ultimately comes to this, that, apart from the case of chemical affinity, one atom of matter cannot actually touch, much less drive into another. There may be contact of forces, but not of the centres of force. The repulsive force on both sides prevents more than a certain degree of approximation. Solidity, fluidity, and gaseity, are the three states of matter, according as its particles cohere, lie loose, or repel one another to a certain distance. Heat is that wondrous agent on the decrease or increase of which these states usually depend. These are some of the essential qualities of matter.

The relations or circumstances of matter do not enter into its essence or constitute its reality. Whole and part, number, length, breadth and thickness, line, surface, solid, figure, have been already described. Figure, like extension, applies, not to the ultimate particle, unless a point can be said to have figure, but to the

collective masses of matter. Place has already been noticed. Motion is the passing of anything from place to place, either absolute or relative. Motion is, of course, not an essential property of matter. Motion and rest are two alternate states, in one or other of which it must be at a given time. The same may be said of spirit. Inertness is the indifference of matter to rest or motion when unaffected by an external influence. This belongs to the nature of a seat of mere involuntary force. Extension has already been noticed. Divisibility has no bearing whatever on a monad of matter, if, as we conceive, it is a mathematical point at which force acts. And when we come to a mass of matter, it is not the matter that is infinitely divisible, but the space it occupies. The material mass itself is separable into its ultimate particles, which may be strictly numerable. All these are relations, which belong some to mind and all to matter. They are not in themselves tangible or palpable to the touch; but they are discernible by intuition and abstraction from masses of matter that have length, breadth, and thickness.

We have already noticed that power, when put forth into action and causing strain or motion, is observable by the touch. It is free energy for the time, and affects that at least which affects mind.

It scarcely needs to be observed that this is the sense which answers most decidedly to the potential faculty of the mind.

TASTE.

The organ of this sense is the tongue, the upper surface of which is keenly susceptible of the special

flavours of all substances that dissolve in the saliva. The corresponding nerves convey to the mind the effects that characterise these different substances. The effect on the organ of taste partakes less of the physical and more of the emotional than that on the organ of touch. The intellectual is active here, as in all the senses, on common grounds. The sense of taste helps to distinguish what is good for food and what is not; and hence the tongue lies as a guard at the entrance of the stomach. Common epithets of taste are sweet, sour, bitter, tart, and the like. Particular tastes are usually named after the articles to which they belong. It is the quality of the object before the mind that receives the name. The effect which is produced on the organ it is seldom necessary to designate. The same term, however, serves for the effect and for the quality which causes it. Thus we say that sugar is sweet, and that its taste is sweet. While touch ranges to some degree over all the states of matter, taste is confined to the sapid, fluid, or dissolved matter which mingles with the saliva.

SMELL.

The organ of smell is the nose, or, more strictly, the nostrils or inner chambers of the nose. These form the chief entrance to the lungs. Gases and effluences of a volatile kind from various substances come into contact with the tips of the nerves in this region, and so the various odours are felt. The effect on the organ here has also little of the physical and much of the emotional. Smells bear a close analogy to tastes, and are designated in much the same way. A smell is said to be sweet or

stale, good or bad, the smell of a rose, a pink, or a daisy, as the case may be. The nose is the sentinel of the lungs, as the tongue is of the stomach. It distinguishes good from bad air. Here we pass from the fluid to the volatile effluence or gaseous state of matter. Certain bodies diffuse an odour to a considerable distance in the surrounding air. It is not necessary here to inquire into the nature of that effluvium which causes the sense of smell. Whatever be its character, this sense occupies the intermediate place between the senses that are mainly affected by the proximate mass of the material object, and those that are affected by a distant mass through an aerial medium or otherwise.

Taste and smell cater for the susceptibility of happiness, guard the avenues of health, and are most closely allied with the will-faculties of the mind.

SOUND.

The organ of hearing is the ear, on the tympanum of which the pulsations of the air fall. By physical science we learn that the affection of the ear is owing immediately to the vibrations of the air. Yet it is to be remarked that the percipient mind takes no notice of this medium. It ascribes the effect on the organ to the material object, from whose vibrations it comes to the ear. The murmur is in the stream. The tone is in the instrument, which thrills from a stroke, scrape, or breath of air. To the organ of hearing we owe all the varieties of sound, strong and weak, loud and low, sharp and flat, shrill and dull, cheerful and plaintive, pleasing and painful, harmonious and jarring, from the softest whisper

to the loudest thunder. Even from this series of epithets it is evident that the effects on the organ of hearing are of the most varied description, and bring into prominence at one time the physical, at another the emotional, and at another the highly intellectual.

The tangible forms of matter afford to the sense of touch very exact and pretty extensive information concerning things around, as they involve in themselves the relations of dimension, and may be examined to a greater extent by the motion of the observer. The senses that take note of the sapid solutions and volatile effluences of matter are very limited in their range of information concerning space, as they scarcely indicate either direction or distance, except in a rude way with the help of motion. When we arrive at the ear, we find the range of observation again considerably amplified. The reverberations of thunder come to us from a distance far beyond the reach of touch, unless vastly enlarged by the aid of motion. The direction, however, is not ascertained by the ear with the same precision as by the hand.

Besides the common use of the senses to indicate the nature and position of things, the ear affords us the peculiar advantages of music, speech, and their several combinations. Music consists wholly of sounds or vowels, the stops or checks of sound being of little or no account in its generic character. A piece of music is a system of sounds regularly varied in pitch and length, and so related to one another as to constitute a melody or pleasing succession. If any note in the series be a complex unison of simultaneous notes, we have so far harmony mingled with the melody. Single notes,

and still more airs, may be of such a nature as to express and evoke any of the varied emotions of the human breast; and hence music exercises a mighty influence on the feelings of man.

If the cadences of music be coextensive with the emotions of the heart, the articulations of speech yield to the ear a range as wide as the whole field of human intelligence. Speech is composed not only of sounds or vowels, but also of stops or checks of sound—that is, of consonants. By the combination of these elements are formed the endless variety of words conveying to the ear familiar signs for every thing, quality, event, or relation, that can come within the bounds of human experience or imagination. On hearing these signs the mind exhibits its wonted determination to attend to the object in question by instantaneously interpreting them, and so overleaping the signs in its eagerness to arrive at the things signified. By this marvellous system of signs for things, I come to learn through the ear the train of thought expressed in winged words by another mind.

Poetry is the combination of speech and rhythm, which is capable of being set to music, and therefore of presenting to the mind, through the ear, the sublimest and most beautiful sentiments, embellished with the most appropriate strains of music.

If touch reveals to us the power of spirit, sound unfolds to us in music, and much more in prose and verse, the emotional and intellectual faculties of man with the most astonishing nicety and effect. And since music and speech have come to be exhibited in raised characters, legible by the finger, the magic power of converse between spirit and spirit has been transferred even to

the touch. But the thrilling influence of music cannot be so conveyed to the sensibility of the soul.

SIGHT.

The eye, the organ of sight, is one of the most precious gifts we possess. Light (p. 12), one of the most delightful objects of sense, becomes known to us by this organ. The physical character of the effect of light on the organ of vision is hardly noticed; the emotional is moderate; and the intellectual is prominent. Light comes to our knowledge not only in its compound state as white, but in its simpler components, as blue, yellow, and red, with all their intermediate shades. It is not only the quality of light, however, but the coloured surface of bodies, which is the object of vision. That quality of a material substance or surface, by which it throws back rays that affect the eye in a particular way, is called colour. This is the proper object of the mind in visual perception, while the light itself, as the effluence of a particular kind of force, is not regarded or directly known by the beholder. Hence we say, The sky is blue; the field is green; the rose is red. In consequence of the reflection of colour from the surface of bodies, and its symmetrical rearrangement in a coloured figure on the retina, we get also from the eye, with the concurrence of touch, the perception of whole, part, line, surface, figure, place, motion, rest, extension, and other kindred relations. The shortest distance of easy vision is about seven inches; and as the eyes are about half that distance apart, the angle under the rays from a visible point at this distance to the two eyes is subtended by an arc

equal to half the radius. As this angle diminishes indefinitely as the distance of the object increases, a slight indication of relative distance is thus obtained, at least if we have any idea of the real magnitude of the object of vision. The eye is also capable of varying the focal length of its compound lens, so that the rays from a very distant point may converge again on the retina, and so a perfect image of the object may be formed. By this means the eye is able to carry us beyond this globe, which is the realm of touch and the other senses, to the remotest visible objects of surrounding space. By the microscope the minute, and by the telescope the remote, are brought within the range of distinct vision. Human art has also added the fields of painting and sculpture to the pleasures derivable from the eye. * Even this, however, does not exhaust the range of information accessible to us through the avenue of vision. For by a set of visible signs or characters, representing the elementary articulations of speech, all that can be communicated through the ear may also be addressed through the eye to the observant mind. By this means all that language can express, except sound itself, may be conveyed through the eye to the deaf mute. The sum total of all human knowledge may thus be inscribed on the written or printed page, and so made permanently available for the instruction of the present and all coming generations. The treasures of language, music, and poetry, may in this way be laid up for the eyes and ears and hearts of all readers.

Light, in respect of its seemingly unlimited range, is the parallel of weight. Like weight also, it comes to our knowledge, at least in the form of heat, by the sense of

touch. It is the counterpart of the attractive force. It plays a most conspicuous and effective part in all the processes of nature. It seems to be present and active in every chemical change, and is an essential moment in the vegetation of plants as well as in the maintenance of animal life.

The eye, like the ear, discloses to us much, not only of material and physical nature, but also of man. We see his form, his face lighted up with intelligence and emotion, his movements, and his voluntary actions. We interpret his gesticulations and his finger alphabet, and we read the transcript of his thoughts. Hence, while touch introduces us ultimately to power in exercise as an attribute of spirit, and taste and smell concern themselves chiefly with the objects of the propensive faculty, hearing and seeing bring us into acquaintance with intellect as well as the other leading faculties of the mind.

The sensible qualities are thus brought before us in a regular gradation from the ruder to the finer forms of matter. By touch we take cognisance of material things chiefly in the solid mass; by taste in solution, or the liquid state; by smell in the effluent, volatile, or gaseous state; by hearing in the vibration conveyed by the air; and by sight in the radiation of light. By these five avenues we obtain a fivefold classification of qualities, under the heads of touch, taste, smell, sound, and look. Along with touch, which is in some respects common to all the senses, are ranged the senses of pressure and heat, which are clearly distinguishable from it. Some relations are common to sight and touch, as figure, involving

quantity; motion, and its negative rest; and number. These are called common sensibles. Motion and rest are in some degree common to all the senses.

Mental philosophy takes no cognisance of the media through which smelling, hearing, and seeing are effected. It leaves to physics the question, whether in smelling the effluvium be a volatile portion or force of the substance smelled, or in hearing the vibration be conveyed through another gaseous substance, or in seeing the link of communication be a radiant quality of another chemical substance. At all events, as there is a case of cause and effect in each of these senses before the organ is affected, it is plain that we are on the borders of the experimental qualities of things.

We may reduce the five classes of sensible qualities, if we will, to three. 1. Tactile qualities of matter, as resistance, gravity, elasticity, cohesion, repulsion, inertia, mobility, temperature. These are immediate and common to all matter. 2. Flavours, including tastes and smells. These are immediate also, but special or peculiar to certain kinds of matter. 3. Radiations, including sounds and hues. These are mediate and special. The first class thus contains the common qualities of matter in the mass; the second and third classes include special qualities, serving to distinguish the different kinds of matter. The first and second classes are immediate, the third mediate.²⁵

III.—EXPERIMENTAL QUALITIES.

There is a vast number of qualities belonging to matter which affect, not our senses, but other portions

of matter, so that the latter affect our senses otherwise than before. These qualities we therefore discover indirectly by the sensible effects which they have upon other things. It is a principle of intuition that every effect must have an adequate cause, which implies a quality in the agent capable of producing the effect. In the case of oxygen and hydrogen combining to form water, each element discovers the quality to combine with the other. Which is in this case to be called force and which capacity it matters not, as capacity is merely an answering force. At all events, we discover in their chemical union one of the properties of each. Hence the perceptive faculty describes a new series of qualities in things by the effects they have on one another. And, accordingly, we multiply our discoveries of such qualities by instituting experiments in which elementary substances are brought into contact one with another. Hence these qualities may, for the sake of distinction, be called experimental. The mechanical properties of masses of matter, the various states it may assume, the simple elements and chemical properties of its different species, open up to us a wide field of ever-growing knowledge, thus indirectly accessible through the senses. The phenomena of growth, the organic structure of plants and animals, and the sensible effects of human actions, make us acquainted in the same way of experience with a vast number of the qualities belonging to the vital principles of the different kinds of living things, and pre-eminently of the human species. For the exposition of such properties of matter and of the lower vital principles, we must refer to the records of the Mechanist, the Chemist, and the Physiologist.

IV.—RELATIONS OF SENSIBLE THINGS.

Besides the sensible and experimental qualities, there are various relations subsisting among sensible things which are obvious to the intuitive reason, though they cannot be said to be palpable to the sense. They have already been investigated under the head of intuition. It is not therefore needful to do more than refer to them here. They start from that diversity and externality of origin which we intuitively discern to be essential to every sensation. After these relations come objectivity, length, breadth, thickness, extension, place, space, whole, part, number, measure, ratio, proportion, finitude, necessity, and so on. These and others that will come to view hereafter cannot affect the sensibility. They do not constitute real properties of things in the sense of forces or causes of affections in other things. Yet they belong necessarily to things as conditions of their existence; and on the occasion of sensation through the intervention of intuition, they enter into our perceptions of things.

V.—EXTERNAL THINGS.

Perception, in the full sense, is the cognisance, not of mere qualities or relations, but of the things that have these qualities and relations. These things are substances; they subsist each by itself. They involve the correlation of substance and quality in themselves. By the exercise of the perceptive faculty on the occasion of sensation, we are introduced to the whole world of things other than ourselves. But we no sooner turn

our attention to the external scene than we begin to abstract quality from thing and from substance for our own occasions of thought and converse. Now we must know, as well as distinguish, and even when we distinguish. Hence the power of intuition manifests its presence, and apprehends the various abstract properties and relations of things. It assures us, at the same time, that, whenever there is a thing, there must be a quality or qualities, constituting its character or essence; and there must also be relation, within at least, if not without; and that the converse of these statements also holds good. Hence we arrive step by step at the full import of things, or the full perception of their nature. In the percipient act it is not the quality, but the thing qualified, that presents itself as a reality to our view. We contemplate, not force or power, but the forceful, the potential, the pressing, resisting, heavy, cohesive, repulsive, elastic, impenetrable, and the like. We regard, not the relation, but the related, other, outward, objective, finite, absolute, extended, divisible, and the like, in all the modes of their actual existence in the world of things. The full development of this outward perception is the science of nature in its most comprehensive form.

VI—THE EXISTENCE OF THE EXTERNAL WORLD.

There is a peculiar property discernible by the intuitive faculty on every occasion of sensation, or any other mental action, which needs to be specially signalled, namely, being or existence. This necessarily belongs to every sensation, though it is a discovery, not of

sensation itself, but of intuition. A feeling is, or exists. That which is felt exists. Descartes' celebrated maxim, *cogito, ergo sum*, is only another application of the same self-evident principle, to which we shall come presently. That which is felt is that which is perceived with the full consciousness of the percipient's mind. That which is perceived has therefore a hold on existence; and the hold, though not the object of the sensibility, is the object of the intelligence, and is therefore as evident and indubitable as the testimony of sense.

The perception of an object, it is true, vouches for its existence only at the instant of its being perceived and as long as it is under observation. It is not in the nature of perception to do more than this. The continued existence of external things, when they cease to be objects of perception, is ascertained by the principle that that which exists cannot of itself cease to exist, nor can it be deprived of existence by any other except the Being who has conferred it. Such existence as has been given is of course contingent on the will of the Giver. But experience has not yet furnished us with a clear instance of contingent existence being withdrawn. On the principle, indeed, that actual being necessarily involves eternal being, a higher perception ascertains the existence of the Eternal and Absolute Being, on whose resolve the existence of dependent beings rests.

Hence, by the process of perception, involving this principle of intuitive reason, I arrive at the knowledge of an external world of things existing around me. It has been maintained, indeed, by Locke and his followers, that the intuitive power gives us no positive quality of things, and that sense alone reveals to us all we know

beyond ourselves. It has been not very consistently concluded by Berkeley, Hume, and his school, that this amounts only to certain sensations. But it is obvious that these philosophers refine rather unfairly on Locke. He evidently means by sense in a crude way all that we understand by perception through the senses; while his critics as plainly mean by it nothing more than bare sense. It is to be admitted that sense by itself is not competent to yield us any more than bare effects. It does not vouch for qualities. It does not show us the affections of the sensibility. For it is consciousness, along with intuition, that witnesses to the existence of these.²⁶ Pure sense cannot, by its very nature, vouch for the properties or relations of things—for quality, place, existence. None of these is of the nature of a sensible effect; else it would not be what it is. But it is undeniable that a thing external, affecting the sensibility in a certain way, and actually existing, comes to view in every instance of perception. As all these particulars are known in perception, it must be by some faculty of the mind distinct from bare sensation. This is the intuitive faculty. It is as indubitable in its testimony as the sensitive, and its voice is as clear as that of sensation. It is manifest that a philosopher cannot affirm that sensations, impressions, or whatever else he may call them, exist, without transcending the discoveries of sense. For existence itself is a property beyond the range of sense, and comes to the mind only by the intuitive power. The sensation is in the sensibility; the cognisance of existence, which is inseparable from it, is from the intellect.

It is to be remembered that the whole import of a

sensation can never be separated from it. This comes out only in perception and consciousness combined. For a sensation cannot be what it is without an effect, a cause, a quality causing, a thing qualified, other than self, existing without, and a sensibility in a self or sentient mind existing within. All this is one inseparable whole, coming to view in and with a sensation. The external thing is due to perception, the internal to consciousness. The sensation is in the sentient mind. The abstract properties and relations come to distinct view solely by the intuitive power. Several different sensations may be experienced from the same object, indicating its possession of a corresponding number of sensible qualities. My perception of the external object may thus be improved. But my knowledge of its real existence is the immediate and inseparable concomitant of my first sensation arising from it. Hence sensations must be taken for what they are worth, and every thing necessarily involved in them must be taken into account, if we are to have a rational philosophy of the mind.

We shall not pursue the discoveries of perception any farther, until we have investigated the other branches of the intellectual faculty.

CHAPTER IV.

CONSCIOUSNESS.

Having examined the faculty that discovers the world without, we turn to that which takes cognisance of the world within. The mind does and feels wittingly, knowing what it is about. Consciousness is the state of

intelligence, which accompanies all its proceedings. It is a constant, active state, rather than a series of acts, of wittingness. Hence we speak rather of parts or elements than of particular acts of consciousness. The term consciousness is used not only for the state of mind, but for the faculty that lies at the root of it. In this sense it is the faculty by which I am aware of myself, of my own mind, and of what goes on within it. It is in some respects parallel to perception. It takes in a concrete thing at a single glance; and it involves what may be called an internal sense, as well as the power of intuition. It is, however, the counterpart of perception in the position in which it stands to its object. In perception I stand over against another thing, the external object, which I observe through those qualities which affect my sensibility. In consciousness I stand by myself, the inward subject, which I note in the exercise of its characteristic powers. But here the contrast ends: for the mind, availing itself of its ever-present consciousness, often turns inwards to have a direct view of its own proceedings. Here it verges upon memory, and puts forth what is called the reflective faculty. It is obvious that in consciousness I have a more intimate knowledge of the object before me than in perception. In the former I know something of the thing in itself, being myself the thing; in the latter I know something of the thing out of itself.

The so-called internal sense has a range no less extensive than the external. The content of consciousness is conveyed in the sentence "I think;" where the word "think" stands for any mental action. There are at least four things involved in this sentence—I and think-

ing, the power of thought, and the existence of the thinker, the power and the thought. The I and the thinking are known to the internal sense; the power and the existence are due to the accompanying intuition. While in the sensibility I have immediately before me only the effect on the organ of sense, in the internal sense I have before me the thinking and the thinker. The I is the agent, the thinking is the action. Accordingly, the agent and the action are expressed in the above sentence, while the power and the existence are understood. Hence, in Descartes' celebrated brocard, *cogito, ergo sum*, the *ergo* is due to intuition, and might have been completed, if the philosopher had needed it, by *et cogitare possum*. For the abstracts, being and potency, will on reflection be found to be matters, not of the internal sense, but only of intuition. The state of consciousness, however, involves the cognisance of the whole of what is here distributed between the internal sense and the intuitive power; and, therefore, the whole of the Cartesian principle. The inference indicated by the *ergo* is, accordingly, nothing more than the abstraction of the intuitive from the apprehensive part in the whole state of consciousness. In the exercise of this remarkable faculty, I stand by, while the whole mental process passes within my view. I am cognisant of myself thinking, of my mind, and all that is going on within it; but not of that which is taking place beyond it. And it is obvious that this power of conspection or cognisance of the internal is not confined to the process of perception, but extends to all the other moods of which the mind is capable. We cannot positively say that in the waking state every act of the mind comes

within the range of consciousness. We are inclined to think that in a moment of listlessness a process of thought may escape with very slight notice, but can scarcely pass altogether unobserved. Things sometimes come up to the memory, of which very little notice seems to have been taken at the time of their occurrence; but this recurrence shows that they were not altogether unregarded. We may affirm most unhesitatingly, however, that it is the function of consciousness to take cognisance of whatever happens to the mind or is done by it. Some separate notice must now be taken of attention, the internal sense, intuition, consciousness, and reflection.

II.—ATTENTION.

It is to be remarked that consciousness admits of degrees of tension. It becomes relaxed when the current of thought begins to flow either languidly or with extraordinary rapidity. The mind sometimes gets into a reverie, the perceptive faculty being sluggish, and we sink into sleep. At other times it becomes excited, and is swept along by the impulse of its own thoughts. In either case, the consciousness of its own proceedings falls into the background. Attention is withdrawn from the inner world. Attention is the earnestness, or almost exclusiveness, with which the mind gives itself to its present engagement. It is not confined to the function of consciousness. It is much more frequently displayed in the expatiations of the contemplative and active faculties than in the region of the reflective power. We talk of attention to business, to study, to pleasure.

It comes into consideration not unnaturally, however, in reference to consciousness, because without some resolute effort of will the inner workings of the mind generally pass without any particular notice. The degree of tension in the application of different individuals to their several pursuits has a powerful influence on the character of their minds, and forms a leading moment in that wondrous diversity of intellectual power which is observable in mankind. Attention is natural to some; but with many it is a voluntary effort to arouse the mind to clear and constant vigilance. Such effort should not be unremitting. An interval of relaxation is demanded, to restore elasticity to the flagging spirits. Moreover, a direct effort of the will is not always the best method of stimulating the mind to a healthy tensity of action. The very laxity of the attention may indicate the inaptitude of the pursuit, or of the subject, as it is presented to the mind. This must be changed, or presented in such a new light as to call forth the spontaneous activity of the powers. Then will mental work be gladly pursued and thoroughly performed. Besides, the natural attitude of the mind is face to face with the objective; and consciousness is only the side glance by which it is aware of its direct proceedings, or, in other words, of the subjective. In the inexperience of early life the novelty and variety of the objects of perception concentrate the attention upon them, and it is only when the mind has become sated, or at least familiar with the scenes of the outer world, that it turns aside with some degree of curiosity and zest to the inner goings of its own being. The matchless perfection of its spiritual nature, the marvellous adaptation of its powers

to the sphere of its observation and activity, and the necessity of its thorough investigation to fit us for mastering the whole situation of things, are powerful inducements to give attentive consideration to the testimony of consciousness.

III.—THE INTERNAL SENSE.

The objects of the internal sense are the proceedings of the mind from the first moment of its conscious existence. These arrange themselves according to the primary divisions already indicated. First are the three fundamental affections experienced in the mind—sensation, emotion, impression. Then in the train of sensation come intuitions, perceptions, recollections, cognitions, conceptions, judgments, reasonings, methodisings. After emotions, in like manner, come estimates of good and evil, inclinations, volitions. And on the track of impression, resistance, motion, action, speech. A part of this series has already come under our view; the remainder is hereafter to be considered. Meanwhile, it may be observed that any element of consciousness—for example, the notice taken of the first sensation—implies its rise and seat in the mind, its existence, and its particular character. Hence self, internality, and existence come to view in the very state of consciousness.

The internal sense, however, takes notice of the mind itself, as well as of its affections. It belongs to the mind, which is the object of its notice; and therefore the mind, in the very condition of consciousness, becomes conscious of itself. Self-consciousness thus belongs to the essence of an intelligent being, and makes its appearance at the

moment of birth ; and the rational mind, in contemplating the whole concatenation of its own doings, is gradually becoming practically acquainted with itself. The exposition of the content of consciousness will, therefore, be the history of the mind.

IV.—INTUITION.

We perceive already that intuition plays its part in the field of the mind within, as well as of the world without. Self, inwardness, and existence, inevitably come up with every form of thought. And any affection of the mind necessarily implies a corresponding capacity or faculty, and a faculty implies a mind. Intuition, as we have seen, takes cognisance of quality, substance, relation, being, and the Absolute. This arrangement of intuitive apprehensions applies to mind as well as to matter.

Quality.—The qualities of the mind are either capacities or powers. The three capacities of sensation, emotion, and impression are properly beyond the reach of will, although the affection of the mind may be modified in some degree by it, and in some cases entirely prevented by voluntarily withdrawing the mind from the exciting influence. The powers include the physical or vital potences and the faculties properly so called. The former are constant in their operation, and do not require or admit to any appreciable degree the regulative control of the will. Of the three primary faculties—understanding, will, and power—the last is under the control of will, with the exception of those seemingly involuntary movements which a sudden and

unexpected event occasions ; an exception which is perhaps more apparent than real. Of the powers of understanding, intuition, perception, and consciousness are only governed by the will, so far as the approach to or retreat from certain objects is concerned. Memory, imagination, judgment, and reasoning are much under the control of will as to their exercise, but not at all as to their findings.

In consciousness we contemplate ourselves from within, and hence become directly acquainted with causes, or the antecedent moments of change ; whereas in perception we observe effects, which are its consequent moments. These causes are the acts of power, which is the all-inclusive attribute of spirit ; and these are performed under the direction of will, enlightened by intelligence. They are, therefore, obvious to the view. And this is the nearest approach we can make to the actual contemplation of power.

Substance.—In consciousness, intuitive reason makes us acquainted with that substance which is characterised by power ; as in perception it discloses that whose quality is force in its various forms.

Relation.—Among the relations that come to view in the region of mind are, self, possession, relationship, freedom, morality.

Self is the characteristic of the individual, and distinguishes one from another. It is the counterpart and correlative of other. It involves the distinctions of me, thee, him, her, it ; subject, the subjective, in contrast with object, the objective.

Possession is belonging. A property, in the metaphysical sense, is a part of my essence or nature ; in a

physical sense, a part of my body, the fruit of my labour, the inheritance of my birth, the gift of my friend. The highest right of possession is creation. Possession involves such distinctions as mine, thine, his, her, its; owner and owned, debtor and creditor.

Relationship we here take in an extensive sense to include kindred, office, state, church. Kindred embraces all the connexions, by birth or marriage, as parent and child, husband and wife. Office comprehends all the relations of business, private or public, as employer and employé. State involves the sovereign and the subject, and all the gradations between them. Church implies our relation to our Maker, and all its incidental connexions.

Morality is the way in which free agents ought to act. It relates to duty, right, truth, moral goodness, and all the cognate relations.

Being.—Being in the abstract makes its appearance in the field of consciousness, as well as in that of perception. The concrete being with whom I become directly acquainted by the inner sense is myself, a person having intelligence and will as well as power, and therefore free and responsible to the Most High for every voluntary act. Consciousness differs from perception here again in this, that it makes me know only the one individual of the one species, namely, myself; whereas perception introduces to my acquaintance the whole host of other persons and things which make up the world of my experience.

The Absolute.—As being comes to view in the field of consciousness, this faculty yields the same ground as perception for the knowledge of the Absolute. As it

shows me a rational and moral agent, it farther indicates that the Absolute must be rational, free, and omnipotent.

V.—CONSCIOUSNESS.

Whenever a mental process takes place I am conscious of myself acting, and consequently existing, and having a certain power. I am able to take cognisance by the inner sense of myself and my act, and by intuition of my existence and power to act. The whole of this constitutes the testimony of consciousness, which is thus parallel to perception. As the latter includes sensation, so the former includes the inner sense. As the content of perception is another thing, existing and acting without, so that of consciousness is myself, existing and acting within. Any part of either I may abstract for separate consideration. This consciousness is the necessary accompaniment of every mental event; and hence in the process of perception I arrive at the knowledge not only of an external world, but at the same time of an internal self. Not only is that perceived, but I am perceiving it. I not only perceive, but am conscious of perceiving. In this concurrent viewing of what I am about, I am obviously confined to my own mind, and what goes on there. Nothing else comes within the scope of my consciousness. I am conscious of the process of perception in all its stages and forms. I thereby make a beginning of that knowledge of myself which keeps pace with the knowledge of external things. This mind is unfolding to me its unexhausted powers, as that world discloses its diversified realities. Not a quality displays itself in that outward scene, which does

not meet with a corresponding greeting from this inward seer; and every such recognition is accompanied with the intelligent consciousness of the observer. Consciousness and perception concur in every sensation of the mind, which then and there becomes aware of the existence and interaction of an external world and an internal self.

And perception, it is to be remembered, is but one of the exercises of the mind. The proceedings of the intelligent being in intuition, memory, imagination, judgment, will, and power, are even more diversified than the discovered qualities of matter. All these exercises, the several faculties and capacities from which they proceed, and the mind itself in which they have their seat, are known to me by the ever-present onlooking of consciousness. With this singular faculty at my command, I become intimately acquainted with the inner working of the mind. It is the business of our treatise to unfold these facts of consciousness:

VI.—REFLECTION.

Consciousness, in its ordinary state, is the side-glance of intelligence which accompanies the proceedings of the mind. But we are aware by experience of the power to turn round upon ourselves, so to speak, and take a direct or retrospective view of the mental process. This is what Locke calls reflection. It is quite distinct from ordinary consciousness, which is a spontaneous light, that keeps pace with the current of mental action. It is a voluntary turning aside of the mind to take particular account of what it was all the time conscious of

doing. It is a reflex act, and so differs from consciousness, which is collateral, and perception, which is direct. It is the only mode of studying the mind, with its multifarious discoveries, tendencies, and activities. It is itself attended with the inevitable consciousness which witnesses every mental process, and is thereby proved to be distinct therefrom. It merges into the memory of mental things, when there is a notable interval of time between the mental event and the reflection on it. When the mind takes this attitude, it becomes its own object, and all its affairs present themselves in an objective aspect. The earnest, patient, and honest application of the reflective power of the mind lays the only solid foundation of all mental science, and yields a reasonable hope of the truly scientific education of the intellectual and moral powers of man.

Without consciousness, perception could not take place; or, if it did, it would be as unavailing for all the purposes of intelligence as the shrinking of the sensitive plant. Apart from this inestimable faculty, I could have no knowledge of my knowing, judging, reasoning, willing, or even of myself, the thinking, willing, acting man. But in the light of consciousness I stand by, and behold myself, my powers, my proceedings. Thus, by means of the perceptive and reflective faculties, I am gradually awakening to the knowledge of the two great departments of created things, the world without and the world within. As the former expands before my view, I find the latter unfolding the hitherto unexhausted depths and heights of its power to apprehend all that comes within the sphere of its observation. These two looks—the one outward, the other inward—have their

unity in the one contemplating mind, which is conscious of itself perceiving that which is out of itself.

By consciousness I am enabled to observe myself alone. By perception only I become acquainted with other men, with persons or intelligent beings, consisting of body and soul like myself. It is requisite, however, to be familiar with some of the other powers of the mind before we can fully understand the notice we take of other men.

It appears from the preceding survey that there are at least three fountain-heads of human knowledge—sensation, intuition, and the inner sense. The former two are combined in perception; the latter two in consciousness. These give us most of all we know of matter and mind, and enable us to distinguish the former as the seat of force, involving law and necessity; and the latter as the seat of power, involving understanding and will.²⁷

CHAPTER V.

MEMORY.

To remember is to mind again, to have again before the mind a thing or event, knowing it to have been formerly experienced. I go through a house, walk into the adjacent garden, and observe the fields surrounding it on all sides. This is an act of perception. I retire to rest, rise the next morning, and survey the same scene. I recognise it as the same which I observed the day before. This is that form of memory which may be called recognition. I proceed to another house, with

its garden and adjoining scenery. I recall the former house, and mark the points of difference. The former part of this act is pure memory. I return to the former house, abide in it from day to day as my home, and become so familiar with its ins and outs, that I am acquainted with it without reference to any particular occasion on which I saw it. This is what may be called knowledge, in the sense of experience, of objects or events. I wander away from my island home to a distant land, where a wild, uninhabited prairie stretches out before me. I remark that there is no home as yet in this wilderness of nature. This is imagination. In this succession of cases we have started from perception. But it is obvious that we might have begun with any other part of the mind's history. I march into the forest, and fell a tree. This is an act of my potentiality. I return the next day, and fell another. On witnessing the scene, I *recognise* the former effect, and *remember* the former act. Pursuing this avocation from day to day, I come to *know* myself as a hewer of wood. Observing others engaged in the same pursuit, I come to form an abstract *conception* of hewing of wood, apart from any actual occasion or operator.

Here are three stages of knowledge, more or less full—perception, memory, and bare knowledge. We start from the complex act of conscious perception, and drop something of what is implied in this at every stage. In perception the state of consciousness is expressed in the words, I know that I see a tree. This involves three elements, which are capable of being mentally distinguished—perception, knowledge of the perception, and knowledge of the thing perceived; the second of which

is due to consciousness. Omit the first, and we have memory; omit the first and second, and we have mere knowledge of the object. This explains to us exactly the relation of conscious perception, memory, and knowledge.

I open my eyes and behold the landscape, to which I may have been accustomed from my youth. This is the complete act of perception. I close my eyes, and the perception is at an end. But that state of my mind which I designate as the knowledge of my perception and of the object perceived, may remain for a notable time after my eyes are shut, or after being out of mind for a length of time may return. This is the essential condition of memory. The knowledge involved in consciousness and perception may be retained. The knowledge of the mind is not an evanescent flash, but a permanent or perpetual cognition. It is the prolonging of all that was in the consciousness and the apprehension, when the object of perception has disappeared from the view. It is more than this. It is not always before my mind. But it is at my command. It is potentially with me. Knowledge is in reality power: the power of reviewing the past, of recalling to mind a scene or event of my past experience, of knowing again things that had once become known in perception or any other process of the mind. When the mind once knows anything, an interval of duration has no power in itself to abolish the knowledge. This knowledge is, therefore, so far perpetual; and there is no reason whatever in the nature of duration why that which has once been within the experience of the mind may not be recalled at any distance of time, however great. This is memory, which invari-

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ably includes two concurrent elements of knowledge—in the case of perception, the object of the mind, and the act of which it is the object; and in the case of other mental processes, the mind itself and its actual process.

It is obvious, from this analysis of memory, that it corresponds in content with consciousness. In the case of perception, the object is known in the perception which is known to consciousness; and they are both likewise known to memory. The other processes of the mind, and their objects, when they have any, are alike known to consciousness and memory. The object and the act are present to the mind in consciousness; they are absent, or, in plain terms, past in memory.

It is also manifest that the ground of memory is consciousness. The bare fact of memory may be expressed in the sentence, I saw the tree yesterday. But this statement gives rise to the question, How do you know now that you saw it then? The answer to this is not far to seek. I knew that I saw it then; and so I know now that I saw it then. Knowledge once acquired is a constant possession. This is the foundation of memory.

Though a mere interval of time, being in itself nothing, cannot have any effect in effacing knowledge once acquired, yet the multiplicity or the attractiveness of the successive scenes which engage the mind, tends to cast much of its former knowledge into the shade. Hence the greater part of our daily experience ceases to be known so clearly and vividly that it can be recalled. Yet we cannot draw any definite line, marking off what can and what cannot be remembered. And it cannot be positively affirmed that any part of that which has once been definitely known absolutely fades away from the

cognisant mind. Some objects are so closely interwoven with our every-day thoughts and habits as to come up again without any conscious effort; some are so frequently impressed upon our attention that they are easily recalled; some are so fast bound up with the exigencies of the times that they constantly reappear; and some are earnestly sought after, and only yield themselves to view with difficulty. This last is the most wonderful case of all; for it implies that we know there is something within our knowledge which eludes our grasp, and we have to search for the clew that will guide us through the labyrinth. When the mind is passive, memory is called remembrance; when active, recollection.

One man differs from another very much in the facility with which he can call up his acquirements in knowledge. Some are indolent and inattentive to that which passes before them; some crowd their minds with objects which, from their minuteness and multiplicity, cannot be definitely observed or clearly discriminated; some fail to make a selection of objects worthy of being remembered; and some allow disorder to reign among the medley of incoherent and incongruous materials which have been admitted into the repository of the mind. To such men the monuments of their past experience are far to seek and difficult of access. The desultory reader or devourer of books, the man of careless habit or rapid life, whether in the way of business or amusement, finds the materials of knowledge so vast in their accumulation, loose in their hold on the mind, and defective in arrangement, that memory fails to recall them with its former readiness. Hence the general

complaint that with advancing years things begin to fade away from the memory without making any lasting impression. Some fail in the recalling of proper names ; some in the recollection of past events, of dates, of poetry, of places ; and some are sluggish in certain lines of thought, because the taste lies another way, the attention has taken other directions, or the mind is of an indolent habit.

II.—HELPS TO MEMORY.

It is important, therefore, to note some of the chief aids to memory. Pleasure or pain, association, habit, taste, leisure, attention, selection, and system strengthen or direct, but do not constitute memory, or give unity to its intimations. Nothing but the retentive faculty itself gives reality and connexion to the process of memory. Pleasure or pain deepens the impression of those states or objects of the mind in which either is prominent. They are, therefore, powerful means of awakening the attention or fashioning the taste.

Association is the handmaid of memory, ministering to her occasions in a thousand ways. The recurrence of the object itself, the mention of its name, the contemplation of anything similar, contrary, or related to it, or connected with it, are the obvious modes of association which are wont to recall past scenes to the mind. Some tie of contingency, reason, or causality, invariably introduces the thing remembered. Hence the power of seizing at a glance the points of relation between things is a very important help to memory. Still it is manifest that the association itself requires an act of memory, and

therefore contributes rather to direct the current of thought than impart vigour to the retentive faculty. It is, however, the thread by which we are often guided to the lurking-place of a fugitive thought.

• Habit, or the facility of action which the repetition of the action gives, is a powerful auxiliary to memory. The learning of our mother tongue is a remarkable instance of this. In the course of two years the frequent hearing of the passing conversation has made not only the sounds, but their conventional meanings, familiar to the infant mind. The habit of reading written or printed speech, acquiring a foreign tongue, writing as well as speaking a known language, or of performing the ordinary operations of arithmetic, exemplifies still farther the wonderful power of frequent repetition to strengthen the association, until it becomes almost instantaneous. Walking, and many of the movements of the mechanical arts, are instances of the same force of habit, in which association and repetition have transcended the mere exercise of memory. In the case of observation, habit transforms memory at length into knowledge.

Taste helps memory, as it diverts the attention from the disagreeable or the indifferent, and concentrates it on the agreeable. Hence the facility which some have in remembering a choice piece of poetry or music, a striking narrative, whether real or fictitious, the scenes of a picturesque country, the facts and phrases of a select science, the details of a favourite business, or the principles of a delightful study. Taste acts like pleasure, of which it is a form, as a spur to attention. It promotes the memory rather of its own special objects than of general knowledge.

Leisure is here the opposite of hurry. It is intended to indicate the calm, self-possessed mode of contemplating things, which does not put the mind beyond its natural pace, nor fatigue or bewilder its powers by a rapid succession of objects. This cool and deliberate way of viewing things is eminently favourable to memory. It allows time for a vivid and complete apprehension, which is seldom effaced from the mind. Hence the city may have the quicker wit ; but the rustic has the fresher memory for the fewer objects which he has more leisurely contemplated. The meditative student of a few good books has a more solid grasp of knowledge than the hasty reader of a thousand volumes.

Attention has already come under our notice. As it is of essential importance to consciousness, it is no less requisite to the efficacy of memory, which is the twin sister of consciousness. The summoning, awakening, and concentrating of all the powers of observation upon the object of the mind, tends to produce a clear, deep, and distinct cognition, and this will leave an indelible impression on the memory.

Selection is absolutely necessary to a serviceable memory, and indeed is instinctively performed with more or less effect. When we hear, speak, read, or write, there is a constant and rapid series of characters and words passing before the mind, which are only signs that need not be remembered after the things signified are presented to the mind. And most even of the things signified are among the minute events of the daily routine of life, which have served the purpose as soon as they have occurred, and then may be allowed to pass into oblivion. The discriminating observer will,

therefore, form a prompt estimate of the various matters of his current experience, and will select for attention and remembrance those that are of moment in the history of events, and leave the others to pass away unheeded and unknown. This selection relieves the mind of an endless series of insignificant particulars, and leaves it fresh and unjaded to attend to the comparatively few objects which it regards with interest. The judicious application of this principle would save the student from the trouble of laying many a burden on the memory, which has afterwards to be laid aside as a useless impediment.

System is of prime importance for the efficiency of the memory. It regulates the law of association. Sound system is based upon reason and the nature of things. It therefore gives rise to a set of associations, which rest upon the relations of truth. It moreover involves classification, which raises memory from a lumber-room of elementary details to a repository of general principles.

III.—INTUITION.

Intuition has its part to perform on the occasion of memory, as well as of perception and consciousness. Recalling the past to mind at the present, I recognise my existence once more in virtue of my intuitive reason. At the same time I arrive at the knowledge of succession, time, eternity, motion, rest, action, inertness, and identity. Memory, being the power of resuscitating the knowledge of former scenes, brings no new qualities or substances to our view. But it affords the opportunity of discerning some new relations. Consciousness, on

becoming aware of a second event in the mind, merges into memory in regard to the first: whereupon intuition describes succession and change. The interval between a first and a third mental act gives to intuition the element of duration. Time how long is a line of duration; time when a point in that line. The date of an event is determined by its distance before or after a given point of time. Eternity is time without beginning or end, or both. Motion, irrespective of its cause, is mere change of place and time. This affords the answer to Zeno's sophisms.²⁸ Rest implies no change of place, and therefore involves only time. Action is the going forth of force, or the exercise of power. It involves change, and therefore time. Inertness is the indifference of matter to action or inaction. It springs from that characteristic of force which has been indicated by need or necessity. Every kind of matter is the involuntary slave of its proper law. This requires time to show itself. Identity is the sameness of a thing. It is ascertained by the comparison of a thing with itself at different times, inasmuch as a thing can be placed beside itself, not in space, but only in time. It therefore involves time, and becomes known only by memory. Diversity may be known by setting two things side by side in space, and therefore by intuition apart from memory. The conviction of identity is most perfect in the case of the conscious self. I know that I, who then was conscious of doing a particular thing, am the same who now remember it; and I am thus assured of my continued personal identity. All these intuitions come to us on the occasion of memory, which is the only faculty that takes cognisance of time.

Hence memory is to time as perception is to space. I

saw a mountain peak in a certain part of space ; I remember it at a certain point of time. Memory enables me to add the height of my past to the breadth of my present. By perception I observe all the realities of space in my range, as they stand around me in the same instant of time. By memory I add the experience of the past to that of the present, and thereby take cognisance of the events of time as they follow in uninterrupted succession. By the former I mark the state of things, whether as agent or patient ; by the latter the action by which they pass from one state to another. Thus memory gives the dynamics, as perception the statics, of the science of nature.

Without memory the past, even of our present experience, would be a blank : the objects of perception and consciousness would flit by us never to be recalled. We should be ever beginning to know, and never making any progress in knowledge. There could be no education, civilization, or advancement beyond the simplest acts of intuitive reason. But endowed with this inestimable faculty of recalling the past, I leap at a single bound from the narrow limit of the present to the loftiest pinnacle of my whole experience as far as recollection serves. And, taking in the whole of mankind, we at once perceive that to memory we owe not only all history, but all garnered experience, science, art, and even wisdom in the application of recorded knowledge. The possibility of all mental growth and attainment and efficiency, for the individual or the race, is dependent on memory as one of its indispensable conditions. Conscious of being gifted with memory, I open my eyes with hope. My observations when they command at-

tention, note themselves in the tablet of my mind. And in it I carry with me a marvellously convenient and available reference-book of my past experience. But all my fellowmen have had or have the same; and the sum of their recorded experience is the inheritance with which I begin the exhilarating pursuit of knowledge.²⁹

IV.—THE UNITY OF THINGS.

Things that have a part in the one act, obey the same law, or involve the same principle, have a corresponding unity in themselves. And the strength of this unity depends on the force and variety of the common bonds by which it is established. If any of these be fundamental, the unity which they constitute will also be fundamental. Several of these grounds of the unity of all things have already come under our notice.

1. Sensation is a fundamental evidence of the unity of things. When all that it imports is taken into consideration, we find consciousness and perception combining to make us acquainted with the external other thing or things perceived and the internal self that perceives; the former affecting physically, the latter affected physically, emotionally, intelligently. The whole forms the world of reality, are here wondrously knit together into one, in the single act or process of sensation, by the twofold bond of perceiving and being perceived, and of being physically affected and affecting. Chemical affinity is a physical tie, combining into one the whole material world. Sensation also involves a physical tie, uniting together not only the material, but the whole material and mental world. And this tie is peculiarly

strong, as it is the fivefold cord of all the senses. But sensation includes, over and above this, a mental tie, binding into one the subjective and objective for the individual, and for the race, too, the observant world and the observable world, in the all-comprehending glance of consciousness.

2. Memory is a valid witness to the unity of all things in time. It compares the past with the present, notes the change by which things pass from the one to the other, and so apprehends the continuity, and consequent unity, of things in succession. The world of yesterday is the proximate parent of the world of to-day.

3. Gradation is a very striking indication of the unity of things. Man is by unanimous confession the chief of earthly things. He is fundamentally distinguished from all others by a fully-developed intelligence. At the same time he is an animal, standing at the head of a prodigiously long series of animals, exhibiting wonderful gleams indeed, but still only gleams, of that full and free intelligence which he alone possesses in its integrity—traces that are bold and strong at first, but become fainter and fainter until they vanish away at the borders of the animal kingdom. And when the last trace of intelligence has disappeared, growth, a potency which has a peculiar affinity with intelligence, continues to display itself throughout the no less diversified series of plants in the vegetable kingdom. And even when at the verge of this kingdom growth comes to an end, law, a quality no less in keeping with reason—the law of physical force—remains to dominate the whole material world. There is undeniable evidence of unity here. It is difficult, if not impossible, for human penetration to

mark the break in the gradation at the end of the animal or of the plant domain ; but this only proves the perfection of the continuity. At the same time, it is easy to distinguish between man and the brute, between the animal and the plant, and between the plant and the mineral in the average.

The question arises, from which end of this gradation does the process of nature start ; from the one element of mental power in man, or from the many elements of material force in the mineral. When the question is put in this way, the answer is not far to seek. It is obvious that man cannot produce a single atom of matter, nor can matter originate a single organic principle, whether plant or animal ; neither can one kind of mineral, plant, or animal generate another. From man we might intelligibly proceed, by eliminating at every step somewhat of that which constitutes or comports with intelligence, until we should arrive at the extreme of necessary law, could we lay down as a postulate that man could either produce a new creature or thoroughly discern the constitution of his own nature. But we have no ground for this large assumption. On the other hand, from the monads of elementary matter we cannot intelligibly proceed up towards man without taking in at every point, from a source external to matter, some element of growth, instinct, or intelligence. Hence we must seek the sufficient reason and cause of the unity of this graduated system of things, not in itself, but in the will of an intelligent, omnipotent Designer and Creator.

CHAPTER VI.

KNOWLEDGE.



At the close of our examination of the cognitive faculties it behoves us to make some remarks on knowledge. The understanding, regarded as inclusive of the observant and intuitive powers, is the proper faculty of knowledge. Whenever I see a man, hear a flute, smell a rose, taste a plum, or tread the ground, I begin to know the objects thus introduced to my mind through the senses. Whenever I have any sensation, or perform any act, I begin to know myself. In the same way, and at the same time, I begin to know the qualities and relations of external objects and of my own mind. This is a concrete and particular knowledge. In conscious perception I perceive the object and I know myself, the perception, and the object perceived. In memory the first of these is omitted, and the other three may remain, and two of them must remain, of which one is the perception or act of the mind. Memory retaining an actual event is still a concrete particular knowledge. It is, however, a knowledge of the past. If now we retain only one of these three points of knowledge, omitting or leaving in the background the others and the circumstances connected with them, we arrive at what may be called simple or general knowledge of persons, things, or events. This knowledge comes by abstraction, after repeated acts of perception, consciousness, or memory. It has passed from the evanescence of a transient event to the constancy of a permanent possession. It refers

most particularly to objects of continuous subsistence, such as persons and things. I know James and Jane; I am acquainted with Ireland, the moon, and the like. Knowledge in all these forms implies the existence of that which is known at the present or at some past time.

Acts of the mind and events of the outer world that have only a transient existence are known simply as parts of our current experience. If recalled after they have taken place, they are matters of memory, rather than knowledge. Yet there are events which are to be set down to the account of knowledge, because they have been so frequently before the mind. Thus the mother knows the birthday of her child; and we all know certain striking events in our lives, as the day we came to be of age, or made an important change in our mode or plan of life. In a similar way, we know the battle of Marathon or of Waterloo. The endless chain of ordinary events renders them unfit to be retained as objects of knowledge. Hence they are allowed to lapse into oblivion, with the exception of those that are of some moment in the affairs of man. These typical or significant events form the staple of our history and biography. Others are of importance, because they form the examples and tests of general facts; but when the general fact has been ascertained, the particular examples may be dropped out of the mind as of no permanent value. Particular knowledge should be very select, that we may relieve the mind of the ever-growing burden of petty incidents.

Knowledge is distinguished from perception, intuition, or consciousness, as an acquaintance from an introduc-

tion, and from memory as a habitual acquaintance from an occasional correspondence. In observation and memory we refer to the circumstances in which our acquaintance with the object was formed ; in knowledge we regard the acquaintance without the circumstances or the occasion on which it was made. I wander through the streets and parks of London for the first time, with a keen perception of every strange feature of the scene. I remember my visit, including a considerable number of the striking objects that caught my attention. I know the city of London, as distinguished by certain grand characteristics, without any particular reference to my personal connexion with it.

All personal knowledge comes to us by the avenues of sense, intuition, and consciousness. It is constantly refreshed by new interviews with its various objects. And it pays a constant round of visits to its familiar objects in the ever-recurring acts of memory. It is supplemented by the results of demonstrative reasoning and the communications of trustworthy witnesses. It rests ultimately, as has been already stated, on the consciousness of every part of our mental experience. It comes in here for notice appropriately, as the final result of observation, distinct from the more complex nature of memory, and standing on the verge of opinion and faith.

CHAPTER VII.

IMAGINATION.

I have observed a field, and a tree in it. I turn round and observe another field, in which I remark there is no

tree. In the second observation I neither perceive a tree nor merely remember the one before perceived. I think of a tree merely, which has not and could not have been to me an object of perception or memory. I do not, therefore, know nor acknowledge the existence of it. I know indeed in this case that it does not and did not exist. I have only the conception of a tree. I am now aware that this selfsame kind of mental operation is involved in my remembrance of the tree on which I have turned my back, and was of course in my perception of it. Hence I find that the conception of an object is actually included in the knowledge of it. The remembrance then includes not only the conception of a thing, but the cognisance of its existence at the time when it was observed; and the perception or consciousness includes not only the cognisance, but the actual observance of the thing as existing. Here, then, are three elements abstractly distinguishable, though seemingly inseparable, in perception external or internal, brought into conspicuous notice by means of memory and imagination—namely, the observance, the cognisance, and the conception of a thing. Perception gives observance, inclusive of cognisance and conception of a thing that is now here; memory gives cognisance, involving conception, of a thing then here or there; knowledge gives the same, without defining time or place; imagination gives conception of a thing, without observance or cognisance of its existence, time, or place. In imagination, the existence, time, and place, as well as the thing, may be conceived; but they are not observed or known.

An undeniable result of this abstraction is, that a perception implies a thing present and noticed by the

mind at the time ; a recollection, a thing past and noticed at a former time ; and a mere conception, a thing not noticed by the mind at any time. A conception supposes a concept, an idea, or ideal thing. A thing known is a concept, and something more ; for it is known to have had existence from experience, faith, or inference. Thus we know that there was a man called Cæsar, there is a people called the Chinese, there is gravity in the sun. The bare object of the imagination does not involve in itself any form of knowledge.

Hence the division of the cognitive faculties into presentative and representative, if it mean that a real representative of a thing is before the mind in memory or imagination, is totally unfounded. In memory, the real thing itself is before the mind, not as actually present, but as past and in its proper place and time. In imagination, the thing conceived is before the mind, not as real or actual, but as ideal, in whatever time, place, and circumstances the mind may fancy. Besides, in this division of the so-called cognitive faculties there is the oversight of making the imagination a cognitive faculty, and talking of its concepts as representatives of things known ; whereas imagination does not imply knowledge. Perception, consciousness, and memory are cognitive faculties, and, by inclusion, conceptive. Imagination is purely conceptive. The one point common to all the contemplative faculties is the conception of a thing. This is in kind the same in all these faculties—an internal act of contemplation ; while the concept or object to which it refers may be extant or not, present or absent or past, historical or imaginary, according to the nature of the faculty in exercise or the circumstances of the case.

The act of the perceptive faculty is properly termed a perception, which tells of the existence and presence of the thing, as well as of its observance by the mind. The state of the conscious faculty may be called a consciousness or conspection of the existence and procedure of the mind itself. An act of memory may be named a remembrance, reminiscence, or recollection of an object or act formerly observed. The act of the imagination alone is properly called a conception, and involves in itself no actual observance, recollection or knowledge of the existence of its object.

The object of the mind has a different relation to it according to the character of the mental act. In perception it is a thing existing outside the mind, a percept. In consciousness it is a process existing within the mind. In memory it is a past event, formerly existing without or within the mind. In imagination it is a thing which is not known to exist, a concept. Apart from existence, or in the abstract, this is what was simply meant at first by an idea—namely, an ideal thing. And it would have been a vast advantage to mental science if the ancients had not refined on this meaning, and still more if the moderns had not abandoned it for one totally different—namely, the conception or act of the imagination, instead of the concept or object of this faculty. This has led to endless confusion, and disposed many thinkers to avoid the term. But it cannot be banished from philosophical or popular language. And it is an exceedingly useful term, if only restored to its original meaning—namely, an object of imagination, an ideal thing. Perception was with the ancients more natural than reflection, the objective than the subjective sphere

of things. Hence in imagination the mind was wont to be in the same attitude as in perception; and the concept or thing conceived commanded the attention, to the exclusion of the conception or act of conceiving. This is the natural tendency of the mind still. Men engaged with the realities of the external scene deal with the *notum*, not with the *notio*; with the thing seen, known, thought of, rather than with the seeing, knowing, or thinking of it. It is only when a man turns aside curiously to look into that thinking, willing, working mind, which he calls himself, that he takes notice of the process instead of the object of thought. In the case of imagination, however, it is carefully to be observed that the conception has actual existence in the mind, whereas the concept proper is a bare idea; not a reality at all, but an ideal thing, which has no place in the real world of matter or mind. But inasmuch as the idea is the object of thought, the figment of the imagination, the counterpart of the conception, it is capable of precisely the same analysis as the conception itself. And the advantage of dealing with the concept rather than the conception is, that it is the direct and not the reflex object of the mind, and therefore more congenial with its native straightforwardness of look.⁸⁰

Ideas are either abstracted from percepts or other objects of observation, or composed out of simpler ideas by the combining power of the imagination. They are either simple or complex. Simple ideas are obtained by abstraction from the objects of mental experience. They are qualities and relations. Substance or thing abstract is also among our simple ideas; and so is being, abstracted from that which is. Complex ideas may also

come from objects of observation by abstraction, or be formed out of simpler ideas by a process of imagination. A thing known is sometimes spoken of as a concept, simply because it is conceived when it is thought of. But the reality of the object is determined, not by the existence of the notion, but by previous experience. An actual conception does not involve a real concept.

The object of perception is immediately before the mind—that is, without any medium between them perceived or known by the mind, certainly without any intervening idea or representative of the thing. It is, in short, the thing itself that is perceived by the mind. So it is with consciousness. The mind stands by and witnesses its own procedure, without any go-between. So it is, in like manner, with memory. Its apprehension is immediate. It describes in the past, and it may be in the distance, the object formerly observed, and now known to have been observed, without any intervening idea or representative of it. And so is it also, be it observed, in imagination. If the concept be otherwise known, it is a thing existing in the world of nature, which is before the mind, and not any representative of it. But if the concept be a mere ideal thing, it has no existence either as a representative or a thing. As there is no reality in this case, it is manifest there can be no representative. The only reality is the act of the imagination; the object of it is merely ideal or imaginary. It is to be observed that in the above statement the phrase "before the mind" is ambiguous, and may mean either observed by the mind, and therefore real, or merely contemplated by the mind, and therefore ideal. With this understanding, it may be laid down as a fact,

with Reid and against Hamilton, that all contemplation is immediate, and that there is no such thing as representative knowledge or conception. It is to be remembered that we refer here, not to the physical, but to the metaphysical conditions of the contemplative faculty.

The imagination, having once stored itself with ideas from the objects of the cognitive faculties, is thenceforth capable of revelling in the wildest fancies, the abstrusest speculations, the most intricate combinations, the loftiest flights, and the grandest scenes. It is possessed of a constructive power. It has devised that most elaborate instrument of intelligent intercourse between man and man, language. It is the source of our music, our painting, and our sculpture. To its plastic power we owe all our works of fiction, all our poetry, as well as the splendid generalisations of our science, and the wondrous achievements of our art. It furnishes the matter and form of our finest orations. There are various processes that come under our review in the manipulation of ideas by the imagination, which now claim our attention. Among these are abstraction, comparison, classification, generalisation, discrimination, division, definition, combination, dreaming, and method.²¹

II.—ABSTRACTION.

Abstraction is the taking away of some part from a complex whole, that this part or the remainder may be contemplated alone, or employed by itself for the purposes of thought. Thus by taking the quality, force, from the thing, matter, we have a quality of things for separate consideration, to which we give a name for our

convenience; and by taking away the individual peculiarities of Alexander, we arrive at the ideas of Greek, European, man. The whole here is a whole of comprehension, as the logicians say, consisting of the various qualities or relations coexisting in any object of contemplation. It has been already remarked that intuition and abstraction imply each other; for we cannot distinguish without discerning, and we cannot discern without distinguishing. Hence a chapter on abstraction is at the same time a chapter on intuition. Abstraction is one of the earliest and readiest of our mental processes. Accordingly we have had occasion to refer to it by anticipation at the very first stage of our investigation. By means of this process we distinguish understanding, will, and power, as the three leading faculties in the mind, which are merely distinguishable and not actually separable parts of the one great faculty of spirit, by which it is what it is. By the same keen edge we have found matter to be a thing of law, need, and force. By a like process of mental analysis we have arranged under the understanding, sensibility, intuition, perception, consciousness, memory, knowledge, imagination, judgment, reasoning, and method; under will, emotion, estimation, susceptibility, conscience, inclination, and volition; and under power, impression, moving, doing, speaking. Again, in sensation we abstract effect, difference, externality, and existence. In perception we farther distinguish cause, necessity, quality, matter, thing. In consciousness, still farther, we set off self, inwardness, mind, person. In memory, observance and knowledge come to distinct view. In imagination, conception is isolated at the same time from observation and existence.

As we proceed we shall meet with other examples of the activity of this habit, which pervades the whole business and intercourse of human life.

As we have the power of leaving out the elements of observance, presence, and existence, so we may single out any property or relation of an object for separate consideration. This is then made the object of imagination, though it can have no separate existence in the nature of things. We may also contemplate thing itself, apart from its individual or special peculiarities. This, including as it does the properties of substance and quality, is a substantive thing, and is therefore called the concrete. A quality, on the other hand, considered apart from the substance in which it subsists, is called an abstract. A concrete is either a genus, a species, or an individual. An abstract is an essential difference, a property, or an accident.

1. An accident is any circumstance which distinguishes one individual from another of the same species.
2. A property is any quality which distinguishes one species from another of the same genus.
3. The essential difference is the property which involves or takes the lead among all the properties that distinguish a species from any other species, or from the genus to which they all belong.
4. An individual is a single one of a kind or species.
5. A species is a class of individuals having the same properties, of which one is the essential difference. Descent from one or a pair of the same family is the essential difference in plants and animals. The lowest species is that which has no species, but only individuals, below it.

6. A genus is a kind or higher class, including a group of species, formed by omitting the essential differences of those species which agree in all their leading characteristics but the one. The highest genus is that which has no genus above it.

The highest genus is being. For any genus or species is ultimately a class of substantive beings. Non-being, therefore, the counterpart of being, cannot be a species; and object of thought, which is the only seeming genus under which the two could come, is as a genus a mere trick of the fancy, or chimera of speculative inanity.

The fundamental species of being are Creator and creature. Creature includes person and thing, spirit and matter. Person includes man, angel, and the like. Thing is animate or inanimate. Animate things are plants and animals. Inanimate things are metallic or non-metallic. It is evident that some species overlap or involve others. Thus person includes Creator.

Abstraction thus involves comparison, and leads to classification and generalisation.

III.—COMPARISON.

Comparison is the setting of several objects side by side, to mark their resemblances, and incidentally their diversities. This affords constant occasion for abstraction. When we meet with several things having all their leading qualities in common, by leaving out of view the accidents, in which alone they differ, we form the conception of a concrete thing or individual of a kind.

This is equally applicable to every individual of the kind. I can particularise the individual by the personal.

pronoun, or by prefixing the demonstrative pronoun to the name of the species: as he, she, it, or this or that aspen. And I may call the single specimen an aspen as properly as any aspen may be called a tree. I may speak of an aspen without reference to any specimen when I wish to refer to its specific character. All the individuals that have the common leading qualities, with only individualising or accidental peculiarities, belong to the same species. But experience alone can enable us to determine the number belonging to any species. When we observe two individuals, even of the same kind, side by side, we are mostly able to discern certain particulars in which they differ, and thus to distinguish the one from the other. Hence, from comparison result classification and generalisation on the one hand, and discrimination on the other.

Resemblance, identity, diversity, analogy, ratio, proportion are among the relations which arise from comparison. The faculty of judgment rests chiefly on this power of imagination.

IV.—CLASSIFICATION AND GENERALISATION.

Classification is the process by which individuals are grouped together in their respective species. The individual, by the abstraction of the accidents or individualities, becomes the special. All the specials have the same common qualities, and constitute the species or class. This process has been already described under comparison. Some species are natural, others artificial.

Generalisation.—If from the several species, having all their leading qualities but one in common, the specific

or essential differences be withdrawn, we arrive at the genus. From the special we thus pass to the general. All the generals, having the same remaining properties, constitute the genus. Thus from a series of species, having all but one of their leading qualities common, as the oak, the fir, the ash, the beech, and the like, the special diversities may be abstracted, and that which has all the common qualities may be regarded as a mere abstract thing, and called a tree. This is the genus, and may be applied not only to any of the species, but to any individual under it. This process may, by way of distinction, be called generalisation. The specialities abstracted from any species constitute its *propria*, or properties, of which the principal one is the essential difference. It is manifest that essential differences of the several species become the accidents of the genus under which they stand. In the same manner we may proceed from the general to the more and more general, until we come to the most general, the aggregate of which will compose the summum genus. The lowest species is that formed from individuals. Every genus becomes a species to the genus above it, until we arrive at the highest genus. The intermediate genera and species are called subalternate.

Genus, species, difference, property, and accident are called the five predicables. "A summum genus, with all its species regularly arranged under it, is called a category or predicament." Any series, from the summum genus to the lowest species, is called a predicamental line; and it is manifest that there will be as many predicamental lines as there are lowest species in the whole predicament.

Generalisation, however, is not confined to things. It is applied also to facts. When we find a series of facts on comparison exemplifying a certain principle or reducible to a common rule, we elicit the principle, and call it a general law. By this kind of generalisation we have been slowly arriving at the general laws of nature. One of the most splendid instances of generalisation was the discovery of the law of gravity by Newton.

V.—DISCRIMINATION.

Discrimination is the contrast to classification and generalisation. As the latter mark out the common qualities in which things resemble one another, so the former notes the diversity in those qualities which are peculiar to different individuals. It is the counterpart of identification, by which a thing is known to be the same with itself. It lies at the root of abstraction. The exhaustive or fundamental discrimination is between that which is and that which is not so characterised. Thus good and not good are contradictories, of which one must be affirmed and the other denied of everything. This discrimination accordingly gives the positive and the negative. The positive is always valuable for knowledge, because it is definite. The negative is of comparatively little value for these reasons. First, it merely removes a certain quality from the thing in question; next, it is indefinite, as it leaves the other qualities undetermined, and therefore gives absolutely no positive information about the thing. And lastly, it generally includes two very distinct classes of things, namely, the class distinguished by the

opposite quality, and the class not having either of the opposite qualities. Thus the not good includes the bad and the indifferent, or those not having moral quality at all. The wicked are a definite class. But who shall define the indifferent, including stones and other materials organic and inorganic, as well as qualities and relations? The negative is therefore utterly unfit to be a matter of discussion; and hence every attempt to discuss a thing indicated by a negative term is worse than useless, as it only leads to confusion and absurdity.

The most notorious and most abused term of this kind is the infinite. In the first place, it may be taken for the contradictory of the finite, which in usage it is not. The only contradictory of the finite is the non-finite, which includes the infinite, as usually understood, and the larger class of things, to which the distinction of finite or infinite does not apply. Secondly, it is often employed to denote the Creator or the Supreme Being. But the term in itself conveys no such intimation. It may be the attributive to a being, a property, or a relation: it may mean, for example, a mathematical series. Is there not a danger of applying something to the Most High which is true only of other infinities, when we introduce the solemn investigation of His nature with a negative term, which does not, and cannot, and ought not to convey any positive information whatever concerning the question in hand! Thirdly, starting only with the term infinite, we cannot positively tell whether it means infinite in every respect, or in some respect, or in what respect. It is plain, then, that we cannot take a single step in knowledge or inference from this bare negative term. If the knight errant of

negation will say at a venture, Let us choose the infinite in every respect, then we may undoubtedly affirm that there is no such being. For a being must have existence and quality. Now existence admits of neither quantity nor degree, and therefore of neither the finite nor the infinite; and a quality, even if infinite in one respect, is in another respect definite, and therefore finite. The infinite in all respects is therefore simply impossible. Granting, then, that the infinite intended is a real being, this being can be infinite only in some respects. Yet we find it sometimes presumed that the infinite must be so in every respect; and certain inconceivable and impossible inferences are drawn from the misconception. But even if we avoid this pitfall, which is concealed from our view by the omission of the word being, still we do not know in what respects this being is infinite from the mere negative term itself. We are therefore under the necessity of assuming again in what respect the being in question is infinite. Thus, while professing to set out from the infinite, we have not been able to take a single step without the assumption of a positive being with some positive qualities; and it appears that the infinite is positively of no avail as a basis or first principle of knowledge, and, if adopted as such, either proves an insurmountable barrier to progress or leads the unwary into the abyss of incomprehensibility. Meanwhile we have learned that a thing may be finite in all respects, but cannot be infinite in all respects; and that the same thing that is infinite in some respect must be finite also in some respects.⁵²

Discrimination has a very wide range, as it applies not only to the question, what is or is not extant, but

to the question, what is or is not agreeable, and lastly to the question, what is or is not possible. It thus plays its part not only on the stage of the understanding, but also on those of the will and the power.

VI.—DIVISION AND DEFINITION.

Division is the distribution of a whole into all its parts. The whole may be either universal or integral: universal, when the parts are species or individuals; integral, when they are fragments or elements of an individual or an idea. In a legitimate division all the parts must be enumerated, every part must be distinct, and every part must stand in the same rank under the whole.

Definition is the explanation of a thing by its essential properties. They may be briefly given by the genus and essential difference, the former embracing all the properties of the thing except the latter and those subordinate to it. This is the Aristotelic definition. It follows from this that a simple property or relation cannot be defined, because it does not consist of parts. It can only be known by intuition on the occasion of experience by sense external or internal. A good definition must be clear, and must contain neither more nor less than the thing defined. Division is to definition as abstraction is to intuition.

Further information on these processes will be found in works on Logic.

VII.—COMBINATION.

Combination results from the formative power of the

imagination. It is the composition of the materials of thought into new forms according to a certain law for a given end. By this plastic power the imagination recombines the simple ideas it has culled from the fields of experience into new compounds according to the principles of the intuitive reason. It finds scope in design, invention, composition, argumentation, system, science, art, and conduct, and therefore comes into play in the whole course of human history, individual or social. The exposition of this wondrous power of the imagination will be found briefly under the heads of reasoning and method, and at large in the arts and sciences, in the literary remains of former generations, and in the history of nations, of philosophy and of art.

VIII.—DREAMING.

Sleep is that state in which wakefulness or self-possession is at rest, and perception by the senses is suspended. These faculties become weary by continued effort, and sink into repose. But in their absence or quiescence the imagination may remain busy, accompanied with consciousness, and therefore followed usually by memory. As the sensibility is lulled to rest, while the nerves are still excited by the state of the body and the influence of external things, the imagination, left in some respect for the time without the guidance and control of that form of reason which we call self-possession, supplies the part of the sensitive and intuitive faculties. Under the continued but not apprehended influence of this nervous stimulation, the dreamer imagines what the sensations are, and then, as in intuition

or perception, what the qualities, persons, and things are that cause these sensations, and in his hour of self-abandonment supposes these objects of his fancy to have a real existence, the back-ground for which is the reality of the effect on the nervous system. The imagination now calls to its aid memory, habit, association, as well as the changing mood of the brain and spinal cord, and by means of these accomplishes the rest of that singular achievement, the dream. Memory furnishes the materials for the drama. Association and habit occasion whatever connexion runs through the performance. The changeful mood of the nerves, played upon all the while by the external world, introduces the breaks, which mysteriously dislocate the parts, and unaccountably diversify the scene and its characters and objects. But while the imagination accepts the services rendered by these attendants, it proves itself master of the situation, and capable of flights altogether independent of adventitious aid. The dreamer finds himself standing by as a spectator, or taking part in the movement, observing the parties appear and act and speak in character, appreciating with pleasure, and even surprise, the witticisms and smart sayings in which they indulge, and even the splendid oration with which one of them will enchant his audience. The versatility and originality of their thoughts, the genius and eloquence of their remarks, far surpass the ordinary ability of the dreamer in his waking state.

Conscience, as well as intellect, plays its part in the experience of the dreamer. He awakes sometimes to approve, often, however, to condemn. He is amazed at the moral heroism he has displayed on some trying

occasion, and again he is ashamed of the moral baseness betrayed in his sleeping visions, to which he would not stoop for a moment in his waking hours. A new phase of power also makes its appearance in the imaginations of the dreamer. He floats along or soars aloft by the mere determination of the will, without any mechanical appliance. But if there be a height, there is a corresponding depth in the events that befall him. At one time he may be at the summit of happiness and power; at another time he finds himself in the extreme of wretchedness and impotence. He falls down a precipice; he is jammed up in a passage, where he has no power either to pass or to breathe. The preacher searches in vain for his text in an indescribable agony, until the time is elapsed, and he beholds the disappointed audience one by one depart. The pleader experiences a similar mental distress when he cannot find his brief, or his notes, or his authorities at the proper moment. And so in every other department of life. Each has his own insufferable anguish in his dream. Time and space are also at the command of the unfettered imagination. The dreamer lays his scene at will in the present, the past, or the future. He knows no limit to the range or the variety of his fancies. He often meets with those who are long since dead; and he has been known to imagine himself going through the whole process of sickness or violence unto death.

The delirium of fever or intoxication, and the hallucination of mental disorder, differ from dreaming in two respects. They occur in the waking state, and they result from disease. The morbid excitement, inflammation, concussion, or contraction of the brain, robs the

soul of its equanimity or self-possession. Hence, to a greater or less extent, the indications of the senses are misinterpreted, and the decisions of the judgment give way to the rapid misconceptions of an ungoverned fancy. The symptoms are here much more confusing and perplexing, in consequence of the intermingling of the real and the unreal; but in other respects the same erratic activity of an unregulated imagination has led to the waking as well as the sleeping hallucination.

Several important conclusions may be drawn from the phenomena of dreaming. 1. Some powers of the mind may be suspended, while others remain in conscious exercise. This opens the way for three possibilities. First, the mind may continue to exist, while all its faculties have ceased to be consciously active. Second, the mind may have activities of consciousness, memory, and imagination, even if divested of the bodily organisation. Third, the mind may have faculties that do not come into the sphere of consciousness.

2. The excitement of the nervous system by external things does not constitute sensation; for in dreaming this excitement goes on, and yet no articulate or genuine sensation takes place. And if it does not constitute sensation, much less does it generate the sentient mind.

3. Every human mind, if freed from the embarrassments of its present surroundings, is equally competent to perceive, conceive, and express the same kind and sum of truth. For there seems to be no limit to the variety of the actors and interlocutors appearing in our dreams, nor of the displays of character, genius, and eloquence which they present, except the degree of information and mental development to which the

dreamer has attained. * And as all this diversity of character and ability is the product of the one dreaming imagination, it follows that there are latent, or at least unnoticed, powers in every soul, which are only prevented from exhibiting themselves in its waking hours by certain habitudes of the body or of the mind itself. Hence, if we leave out of view those common forms of bondage under which the human spirit labours, by correcting, as far as possible, the special conditions of mind and body affecting each individual, we shall approximate more and more to the demonstration, that every human intellect is possessed of precisely the same power. Every child, without distinction of sex, may be taught or may learn, if rightly directed, all that any other has ever acquired ; and, from the same premises, every mature intellect, if released from all disturbing influences, will arrive at exactly the same conclusion.

4. A less degree of that hallucination, resulting from an unbridled imagination, which appears in dreaming, serves to account for the divergence of opinion which prevails among men. If reason throw up the reins for a moment, the unguarded imagination may present the false in the place and guise of the true. Inadvertence is the origin of all the error which does not arise from the spirit of wilfulness. 5. The dreamer never transcends the bounds of his waking experience, not even when the wild fancy revels in the most fantastic combinations, not even when, overstepping the boundary of the visible, it lands in the invisible world, and there surrounds itself with an ideal creation. 6. Nowhere does the special function of consciousness stand out in a clearer light than in the dream. The dreamer dis-

tinguishes himself from the other characters who are present, hears himself speak and sees himself act as well as the other parties in the scene, while the whole drama is the product of his own imagination. Thus he stands by himself as an intelligent companion, hearing, understanding, and judging of what he says and does, and even thinks. The man, indeed, who has acquired the habit of abstraction, will, even in his waking hours, converse with himself when alone.

7. A dream may disclose to us what we could not discover in our waking state. We do not now refer to revelations from the world of spirits or from the great Spirit, who called us into existence and can commune with us whether waking or sleeping. Apart from this, we may during the day be in quest of some forgotten fact or absorbed with the investigation of some scientific problem, and the recollection or solution, which was sought in vain while we were awake, may come to us in a dream. There is ground for the common proverb, that dreams go by contraries, inasmuch as the dreamer, bereft of his presence of mind, is abandoned to a fortuitous reverie, which is oftener contrary than agreeable to the reality of things. But if a process of investigation or a train of natural association be presented by the imagination, the reason, freed from the distracting interruption of the outer world, will follow the slender thread of present knowledge to the ultimate issue sometimes with more readiness and success than in the waking moments. Hence a lost thought has often been recovered, and a difficult problem solved in a dream. And as the future is connected with the present by physical laws, some of which at least are known, a

dream has often in a wonderful way foreshadowed the coming event. There is a slumbering power within us of putting this and that together, of estimating the consequences of things, and of descrying the distant result, analogous to the calculation by which the philosopher foretels the eclipse, which only stalks forth wide awake when we are sequestered from the importunities of sense. It is to be remembered, however, that this is a very precarious source of knowledge, and in the absence of experience and information would amount to no more than the bare possibility of calling to mind where we had deposited a ring or a paper of value. It serves a better end in yielding us the good lesson, that, in our waking researches, we should exclude, as far as possible, all extraneous matter, simplify the problem before us, and place full reliance on the faculties with which we have been endowed.³³

CHAPTER VIII.

OPINION.

Endowed as we are with the power of imagination, it is our native bent to form designs, and, as far as things are at our own disposal, to set in order the train of circumstances fitted to bring about the end in view. Hence when a given series of events, not of our own devising, is presented to our notice, we are prone to conjecture or forebode the issue. This is opinion; and it is remarkable that it starts on the very presumption that a reasoning, imagining, planning Being has produced the train of occurrences before us with a certain

purpose. Hence with more or less of confidence and definiteness we anticipate the result. A shade of uncertainty rests on our surmise, because we are not sure that we are acquainted with the whole chain of facts from the beginning to the present moment. And a degree of diffidence forces itself upon us when we measure our own powers with the unsearchable wisdom of the great Disposer of all events. With these abatements, however, we never fail to form opinions in given circumstances, which may be confirmed, modified, or even reversed by after experience.

Whenever we perceive an object, and thereby know that it now and here exists, we entertain the opinion that it continues to exist after we have turned away from it. This opinion is confirmed when we reflect that that which exists cannot of itself cease to exist, and cannot be robbed of existence by anything that did not confer that existence. It is modified, however, by the remembrance that a derived existence may be withdrawn by the original Giver. But it is again confirmed by the experience that the Giver of existence has not in any known instance withdrawn the gift. It would also be confirmed if it appeared that it would be inconsistent with the nature of the Eternal Being to withdraw existence when once given. And, finally, if it were granted that the existence of the object in question is underived, the opinion would rise to an absolute certainty.

Even when that which is perceived fades away from our view while we are perceiving, as in the case of the rainbow, or sensibly loses substance or existence, as in the case of burning, or manifestly alters, as in chemical

change, experience has established the preconceived opinion by showing that in all such cases there is only a change of arrangement, and no extinction of a single element of that which previously existed. All these considerations put together serve not only to confirm this opinion, but also to give it its true import and set it on its proper ground.

Opinion varies through all the forms of conjecture, hypothesis, theory, conviction, and certainty. We must be perpetually on our guard, lest a mere opinion be unwarily exalted into a theory or a certainty without sufficient grounds. The theory of electricity is a splendid instance of a happy thought converted into an established fact. The more general theory of light is perhaps still labouring under the uneasy burden of a preconceived opinion raised to undue importance by the partial solution it affords of the phenomena of vision.

Undue confidence in our own opinions is an easily besetting sin of our humanity, and tends very much to hinder that pleasant sociality which arises from the reception of the truth, the whole truth, and nothing but the truth.

II.—ERROR.

Ignorance, arising from the limits of our faculties or opportunities, cannot be imputed to us as a fault. Our education may be defective, some parts of it even misleading; our health may enfeeble our powers, or retard our progress; our life at length comes to an end. All these causes prevent us from acquiring even the amount of knowledge which is open to our mental powers. The ignorance, however, which arises from heedlessness, in-

dolence, or unwillingness to know the truth which is within our reach, involves blame, especially if the truth neglected be of easy access, and have an important bearing on our interest or our duty. Ignorance of this kind is altogether inexcusable, and is sure to bring its own punishment after it.

The love of knowledge, however, still lives in the human breast. And the short life of the individual is in some measure counterbalanced by the perpetuation of the race. The man of science stands on the shoulders of the generations that are gone before him, and may thus be enabled to see a little farther into the nature of things. In this way notable advances have been made from age to age, both in adding to the facts of science and in improving the methods of research. Still it is found that the more we know concerning ourselves and the world around us, the more fully we become aware of the vast extent of our ignorance. This result, indeed, is only what we had reason to expect.

There is, however, a part of our daily experience which, were it not so familiar, is well fitted to strike us with surprise, if not with dismay. This is the vast amount of error that is prevalent in society. It is a serious question how a race of intelligent beings should, not merely remain ignorant of much that might and ought to be known, but have fallen into numerous and dangerous errors on matters of the utmost moment. Yet the fact is undeniable. For truth is one. Yet the most discordant opinions, not only upon popular subjects, but even upon speculative and religious questions, are broached in private converse and in public prints. Now of two contradictory propositions one only can be

true, and the other must be false ; and of several incongruous views of the same subject all but one must be, and all may be, at variance with the truth. Hence it is manifest that, as there is much diversity of opinion, a large amount of error must have taken hold of the minds of men. This is a very alarming state of things, indicating either the intellectual incompetence of men to ascertain the truth on these points, or their moral inability to look fairly at the truth. It is manifest that many questions cannot be solved, and that many others await solution. This, however, would only involve a confession of ignorance, if men were honest. It is a palpable fact, moreover, that many questions have received satisfactory answers. This goes so far to prove that the human understanding is sound. These considerations raise the presumption that it is a moral obliquity that has given rise to diversity of opinion. This presumption will become a certainty, if it appear to be the essential nature of pure intellect to discern the truth, and if the wilfulness of the heart be found sufficient to account for the existence of error.

It cannot for a moment be imagined that diversity of opinion arises from a constitutional diversity of intellect in man. Intellect may admit of degrees of clearness and compass. But wherever it exists in any degree, its apprehension of the same fact must be identical in all minds. It is impossible that one intellect should perceive a number of objects to be four and another five. Intellect, so far as it goes, perceives the object before it as it is, and cannot be so altered as to perceive it to be otherwise. It may be annihilated, but it cannot be made to perceive that to be so which is not so. Hence

it appears that the origin of error must be, not in the intellect, but in the will.

The will operates directly, not on the intellect, but on the imagination, which it bends to its purpose. The love of knowledge takes the form of *impatience of ignorance*, in cases where the question does not admit of ready solution. The imagination, under the impulse of this impatience, extemporises a solution of the problem on plausible grounds, which is announced as a lucky conjecture with all the assurance of a narrow experience and an untrained reason. This is accepted by many on the authority of a brilliant genius, or at all events a bold fancy.

When the philosophic spirit has to contend with an indolent temper, *impatience of the trouble* involved in research leads to a similar result. The prompt speculation is to such a disposition more agreeable than the slow and wearing process of experiment and observation, which may not yield a clear result in a lifetime. This is too long for him to wait. He will give a categorical answer at once, and risk the consequence of an investigation, which may possibly confirm his hasty guess in some distant era.

Impatience of a discrepancy, which the speculator has not been able to reconcile, prompts the surmise that an opinion which appears to him contradictory or subversive of one of his most cherished convictions, must be false, and is to be rejected, though it may rest on as good grounds as the one that is acknowledged and maintained. Thus the believer in predestination is prone to deny free agency, and the reverse.

Lastly, the element of self-interest may enter in one

or more of a thousand forms, and kick the beam of judgment. In this case, *impatience of the truth itself*, because it makes against the present bias of the will, impels the fancy to suggest a more agreeable solution of the question, and to devise a series of specious arguments by which it may be defended. The will here studiously keeps the true state of things from the view of the intellect.

It is manifest from these remarks that the remedy against error is to be sought in the rectification, not of the intellect, but of the will. The imagination, like the power, is not moral in itself; but it is liable to be abused, like power, by a will more or less biassed by unworthy motives. Let it be rightly used, and it becomes a handmaid of truth. In particular, let no proposition be accepted as true until the sufficient reason of it is seen, no matter what impatience of ignorance, of labour, of discrepancy, or of truth itself, may urge. Ignorance is incomparably better than error. Let no hypothesis reckon for more than a hypothesis until experiment and argument have demonstrated it to be fact. If these simple rules were honestly observed, discordant opinions would soon take their flight from our world.

CHAPTER IX.

FAITH.

Faith or belief is the reliance one man places on the testimony of another. As the testimony of others is expressed in words, it presupposes perception by the senses, through which words are heard or read; under-

standing, by which these words are interpreted ; consciousness, by which thought and personal qualities are learned ; memory, by which the facts of experience are recalled ; and imagination, by which they are expressed under the symbols of articulate sound. If the testimony of men were uniformly accordant with fact, reliance on it would invariably be unreserved, and faith would be a source of unquestionable information. But as it varies in its adherence to fact, according to the degree of sincerity and competency in the witness, it becomes necessary to distribute it into the indubitable or credible, the probable and the improbable. The morally certain in testimony may be styled the infallible, when it comes from a source that cannot deceive or be deceived. Testimony may be so far from exception, either in regard to the competence or the integrity of the witnesses, that it would be unreasonable or morally impossible to reject it. The probable, and of course the improbable, admit of various degrees, and are liable, by further evidence for or against, to be raised into the morally certain or to sink into the incredible or demonstrably false.³⁴

II.—CREDIBLE THINGS.

I am aware of an immense number of sensible things that have never come under my personal notice. My senses have only a limited range in the present. The information I thus acquire may be vastly augmented in two directions. First, in space my knowledge may be multiplied by the experience of every individual who occupies a different stage of observation over all the world. And next, in time it may be accumulated by

all the records which the men of former generations have handed down to the present. In this way the gathered and in some degree sorted information of the whole human family becomes accessible to me in the shape of history, geography, and the numerous arts and sciences which adorn and enlighten our age. Into the various and remarkably effective ways which we have at our command, of sifting and testing the traditions of other days, it is not our business here to enter. Suffice it to say that a large and valuable treasure of reliable facts concerning the history, institutions, and attainments of the most eminent tribes and individuals of mankind have come down to us in the authentic documents and monuments of the past.

This completes our review of the sources of the knowledge of actual things and events. Sensation, intuition, perception, consciousness, and memory are the five avenues by which we arrive at the knowledge of an observable world. Sensation and intuition culminate in perception; the internal sense and intuition coalesce in consciousness; memory recalls from the past the discoveries of perception and consciousness. Faith is secondary and auxiliary to all these; and yet from this we derive incomparably the greater portion of our information. The sphere of my personal observation is a small part of the world I inhabit. The affairs of the present, however important in themselves, are but the narrow margin of the far-reaching past, and derive their principal importance from being the new-born offspring of the bygone history of humanity. The experience of my present and past is immeasurably extended by that of men of other times and climes.

CHAPTER X.

JUDGMENT.

Judgment is the faculty by which we perceive a relation of any kind subsisting between one thing and another. It comes into exercise on the comparison of things, and therefore presupposes observation, memory, and imagination. By it we become acquainted with the numerous tribe of relations in which things and their qualities stand to one another. The sources from which the decisions of the judgment come are intuition, experience, and reasoning.

I.—INTUITION.

This faculty has been already noticed, as discerning the qualities of things, and ascertaining the relations involved in them. It is now to be considered as the faculty of axioms, or self-evident truths, that take the form of judgments. That being, for example, cannot be without substance and quality, or that substance cannot be without quality, is an axiom or self-evident judgment. Every science rests implicitly on some of these intuitive principles, and evolves its conclusions from them, either alone or conjoined with certain facts of experience, though it may not explicitly avow them. Metaphysics is the science of first principles. A pure science rests on self-evident principles; a mixed science combines with these the facts of experience. The mathematician takes due notice of them, and gives clearness to the force of his demonstrations by tabulating and

referring to them on every suitable occasion. Physical science rests on such principles of truth. And it will be found that ethical philosophy has its foundation in the dictates of intuitive reason. The following are among those that give consequential force to the enthymemes of mental philosophy.

1. *That which acts is.* This is involved in the famous brocard of Descartes—*cogito, ergo sum*. It may be extended thus:—That which acts or is acted upon exists. And it may be parted into various branches, of which the following are the most important:—That which feels or makes itself felt exists; that which perceives or is perceived, is conscious or is an object of consciousness, exists; that which remembers is, and that which is remembered was. These propositions carry their evidence in themselves. The very first is deeply interesting, as it involves in the act of sensation the coexistence of the sentient and the sensate. And as it belongs to mind alone to feel, and to matter and mind in common to make themselves felt, this implies at once the existence of an inner sentient principle, and of an outer world of matter and mind. Every act of perception, consciousness, and memory involves this axiom. It is the fundamental principle of Ontology.

2. *Every thing must have some quality.* And every quality, be it force, power, or capacity, must belong to some thing. Mere entity without property is impossible; and so is property without corresponding entity. Quidity and quality, or itness and suchness, cannot be separated. A thing is nothing or is not, without quality. Take away all quality, and you have nothing. Hence, matter cannot be without force, nor spirit without power.

This is the ground of Cosmology and Psychology, in the wide sense of the history of the properties and relations of things, both material and mental.

Certain relations that do not involve any reality may exist with or without a real thing to which they belong. Thus length, breadth, and thickness belong to a portion of space, whether it be empty or occupied with a real thing.

3. *An effect must have a cause.*³⁵ This is a positive and wider form of the Latin adage, *Ex nihilo nihil fit*. Wittingly or unwittingly, this is employed in every investigation of nature. This maxim may be expressed in the more precise form: a given effect must have an adequate cause. This is the "principle of the sufficient reason." A thing must have some property, and may have several properties, either forces or powers, by which it operates on others that have any of the corresponding capacities. Hence one thing may have in itself the potences of many causes, and other things the capacities for the corresponding effects, whenever they come into working distance of one another. These two axioms are the starting principles of philosophy, the object of which is to ascertain causes, *rerum cognoscere causas*. *The same cause has the same effect*, and the reverse. This is what is called the constancy of nature. The effect cannot rise above the cause.³⁶ This is the theme of Philosophy, which is the science of the causes of things, and in particular of Physics, in the broadest sense, as contrasted with Ethics. In this wide sense Physics deal with cause and effect, and embrace the sciences of mental power and material force.

4. *A thing is itself and not another.* This is the axiom

of identity and diversity. It involves the law of "excluded middle." There is no mean between entity and non-entity.

5. *A whole is equal to all its parts.* In a universal whole, whatever all have or want, some have or want. This involves the *dictum de omni et de nullo* of Aristotle. It is the principle of the syllogism. A whole is greater than its part. This applies to the integral as well as the universal whole. These principles lie at the root of Logic.

6. *Space is infinite.* And *duration is without beginning or end.* Infinity is a mere relation, which involves no reality, and therefore applies to space and time, which are in themselves bare relatives, without any real entity. This shows how unfit the infinite, without any further definition, is to be the first principle of nature or philosophy. These two maxims belong to Mathematics.

7. *It is right to leave, and wrong to take, that which belongs not to me.* This holds still more clearly of that which I know belongs to another. It is right to speak the truth, to acknowledge what is good in another, to be grateful to the giver of any good.

8. *It is good to love others.* This implies that it is good to do to another as I should wish him to do to me. It is not good to leave either undone, and it is evil to do the contrary. These two axioms are the foundations of Ethics.

Intuition has one pure science entirely belonging to itself, namely, Mathematics, the science of quantity. The reason of its purity is that quantity is a mere relation, not involving any reality, and therefore not encumbered with any external condition. And it is

astonishing to contemplate the grandeur, complexity, and refinement of its problems and theorems. Its applications are also wonderfully numerous, diversified, and important. The first principles of metaphysics and ethics are likewise self-evident; but the range of their pure development is much more limited. These three primary and pure sciences correspond to the three primary faculties of man, power, reason, and conscience.

II.—EXPERIENCE.

Experience is here employed to include the faculties of perception, consciousness, and memory, and covers the whole field of the mental and material world. It notices, moreover, not only the objects themselves, but a growing number of the innumerable relations which subsist between them. Proceeding according to the first principles of intuitive reason, and availing itself of the aid of the imaginative or constructive faculty, it abstracts, classifies, generalises, compares, and systematises the great facts of material and mental science, which it has accumulated. The multitude and diversity of these facts are so vast, that subdivision of labour in the field of science has now been carried to a prodigious length. The votaries of each science are yearly adding something to the exposition and illustration of the nature of things.

Faith in testimony multiplies my experience by that of all other witnesses of the operations of nature who have a different field of view from my own, and at the same time enables me to bring in the past to confirm and illustrate the present. By this means I am put in possession of a vast amount of information concerning

the relations of things, which is so strongly attested by the competence, honesty, multiplicity, and unanimity of the witnesses, that I can rely on it with as much confidence as on the evidence of my own senses. It comes to me in the twofold form of history and science, and constitutes the magnificent contribution of the forefathers of mankind to the education of the present generation.

III.—REASONING.

Reasoning, the third source of the formation of judgments, comes under consideration in the following chapter.

Among the fundamental relations that come to our view by these avenues of knowledge are existence and non-existence, substance and quality, cause and effect, identity and diversity, likeness and unlikeness, equality and inequality, whole and part, finite and infinite, having and wanting, necessity and contingency, possibility and impossibility. These in their abstract form are perfectly intelligible to us, and are due to the intuitive faculty. But the range of facts we can place under each category is extremely diverse. We can ascertain existence within the sphere of perception and consciousness by observation, and to a certain extent beyond it by inference. Non-existence we can determine within the range of the impossible. But in the wide field of the possible we cannot affirm, if the object in question be beyond the ken of our powers of observation. Identity is most clear in the case of our own persons. Diversity extends as far as observation or imagination reaches. The other relations have also their respective limits.

CHAPTER XI.

REASONING.

Reasoning is drawing from two judgments, called the premises, a third called the conclusion, which is involved in the other two. The simple principle of all reasoning is, that whatever applies to the whole of a class applies to that which is known to be a part of it, and likewise whatsoever does not apply to the whole does not apply to any known part of it. In the natural order, the first or minor premise assigns the part to the whole, and in the second or major, some attribute is declared to apply or not, as the case may be, to the whole: whence it is gathered in the conclusion that this attribute applies or does not apply to the part already assigned to the whole. Thus—

These men are unjust; all the unjust are to be condemned:

∴ These men are to be condemned.

This is the regular syllogism in the first figure. The other three figures of the syllogism may be reduced to this.

There may, however, be a series of wholes, of which the first includes the part in question, the second the first, and so on to the last, which therefore includes all the preceding ones, and consequently the said part. All this is accordingly equivalent to a minor premise; after which comes the one major premise, in which a certain class is inclusive or exclusive, as the case may be, of the

last whole, and hence, in conclusion, inclusive or exclusive of the said part. Thus—

These men are robbers ;

Robbers are unjust ;

The unjust are to be condemned ;

The condemned are to be punished ; those to be punished ought not to be at large :

∴ These men ought not to be at large.

This is called a sorites.

The argument, though invariably the same in substance, may yet vary very much in form. In regard to the four figures of the syllogism, the division into categorical and modal syllogisms, and the reduction of the indirect to the direct form of the argument, we must refer to the treatises on Logic.

Induction is the process by which we rise from particular instances to general facts or laws. It is an enthymeme, that is, a syllogism, which has a common and tacitly conceded major premise understood, though not expressed because it is uniformly taken for granted. This premise may be the constancy of nature. Thus—

That is the cause that produced this effect ; (the cause that produced it once will produce it always) :

∴ That will always produce this effect.

If we have one clear instance of a given effect of one substance upon another, we conclude at once that it will have the same effect in the same circumstances. We make a second or third trial, not to give us a fair excuse for arguing from the particular to the universal, for which there can be no excuse, but merely to prove that our instance was a good experiment, or that no undetected influence was at work. Induction, then, is

only a particular form of deduction. We find, for example, that this cube of gold is weightier than that equal cube of silver; whence we conclude at once that gold has a greater specific gravity than silver, because it is understood that the nature of things is constant. But from the fact that gold and silver are weighty, we cannot infer that lead is weighty or that all substances are weighty. This would be a false induction.

Induction is an instance of the *a posteriori* mode of argument, in which we proceed from actual instances to general facts or laws. In the *a priori* method we set out from axioms or self-evident truths. The former is the method of the mixed sciences; the latter of the pure sciences.

The conclusion in reasoning is either certain or uncertain: certain, if all the premises be certain; uncertain, if any be uncertain. The uncertain is either probable or improbable. The probability of the conclusion admits of various degrees, and cannot be greater than that of the less probable premise, nor equal to it, unless the other premise be certain. If more than one premise in a train of reasoning be only probable, the probability of the conclusion may be expressed by the product of the proper fractions which express the probabilities of the premises, and therefore is less than the least of them. Probable premises arise from three sources, questionable testimony, conjecture, and probable conclusions from former premises.

Conjecture is a guess or surmise of something in the absence of experience or evidence. It is the work of imagination, building upon analogy to other cases presenting seemingly like circumstances, and calling in the

aid of reasoning from hypothetical premises. It deals with the probable or the improbable in all its various shades, from certainty down to sheer ignorance. It is of some value in directing research into promising lines of discovery. It is the ground of hypothesis and theory, as a provisional anticipation of science. It has not unfrequently been rewarded with the discovery of the object or fact to which it enquiringly pointed. Care must be taken, however, not to ascribe to it a greater degree of probability than it merits. It is at best but the faltering hand that beckons me into the uncertain region of the probable, when I have arrived at the limits of present experience.

The inferences thus made form a third class of judgments, and complete the sum of human knowledge. The principles of intuition and the facts of experience and unimpeachable testimony are the foundation stones of science, and the inferences from them go to make up the superstructure. Intuition and reasoning on the relations of quantity give us that marvellous achievement of the human mind, the science of Mathematics. Intuition and reasoning on the axiomatic principles of truth and duty yield us the unspeakably important sciences of Metaphysics and Ethics. Intuition, experience, and reasoning, on the principles of the former in combination with the gathered fruits of the latter, furnish us with the vast and varied sciences of Mind and Matter. And hence the three great sources of the judgments of the mind concur to swell with their overflowing streams the great ocean of human knowledge.

II.—THE EXISTENCE OF GOD.

We have now gone over all the sources of knowledge that are accessible to us: and this is therefore the fitting time and place to notice some of the intimations they give of the existence of the Author of Nature. They have made us acquainted with the existence of things without and within us; and it is reasonable to expect that they will convey to us some plain indications of the transcendent and momentous existence of the Eternal Being. We are not prepared to furnish the whole evidence which they give of His existence and nature, because we have not yet considered two of the three leading faculties of the human mind, but, above all, because we can only touch here upon a few obvious points of this inexhaustible theme. But for the more satisfactory and intelligible discussion of the moral nature of man, it is better to lay down some of the fundamental grounds on which we are assured that God is than to assume this fact as a matter thereafter to be demonstrated; especially when we have already examined all the faculties of knowledge which the mind possesses, and noted the existence of all the other beings which we have thereby ascertained. The existence as well as the nature of the Supreme Being is indicated in a clear and intelligible manner as a necessary fact by the intuitive and observant powers. The elements of this indication, most of which have been already noticed, as occasion offered, it is now our business to recapitulate. It is proper to observe that the particulars here stated are not the consecutive parts of a single argument, but, as far as they go, the co-ordinate indications of the existence and character of

the Most High. Most of them stand side by side, and are therefore cumulative in their force. Some of them may have little weight with certain minds ; but some are fitted to produce in all an irresistible conviction.

1. It is obvious that something must have existed from all eternity. For it is self-evident that from nothing nothing could come. But by observation we learn that a world of things exists, and hence something must have always existed. The question is what must that eternal thing be. This, at all events, proves that there must be an Eternal Being.

2. There must be some Absolute Being that exists of itself. For since something exists, something must have existed without a beginning. But that which exists without a beginning, exists absolutely and in itself. Hence it is evident there must be an Absolute Being.

3. Matter, by its very nature, cannot originate anything. It is a substance characterised by fixed properties, acting of necessity, according to an invariable law. Its whole path is therefore marked out, from which it cannot deviate. Its entire behaviour, in all possible circumstances, can be calculated by a mind acquainted with its whole nature. Mind, on the other hand, may, and habitually does, originate something new, simply because it has power, which involves freedom, will, and intelligence. Matter may be conceived out of existence without involving any impossibility. A spirit of adequate power may therefore originate matter in all its forms. And a spirit only can create. This proves that the Eternal Being must be a spirit.

4. By intuition we discern and by abstraction we distinguish substance and quality as necessarily coexist-

ing in every real thing. Substance is the property of holding quality, and therefore so far subsisting, which we recognise in everything that has a separate existence. But though we cannot but acknowledge that every single thing subsists or is a substance, yet we are not constrained to hold that all these things are self-subsistent. On the other hand, it involves no contradiction to conceive matter and mind, as they subsist before us in the world of things, to be dependent on another who subsists absolutely by himself. Now, it is the dictate of a sound philosophy to economise causes, and therefore to seek for the subsistence of all possible dependent things in a single self-subsistent. At all events, it is indubitable that there must be something self-subsistent; while men and things are not such. Hence it is evident that there must be an eternal, absolute, self-subsistent Being.

5. By the same intuitive reason we discern the necessary connexion of cause and effect in every actual change. Whenever we observe an effect we intuitively presume as necessary a cause adequate to its production. We distinguish the immediate and the ultimate cause. We can conceive the observable world, as a whole, consisting of persons and things, to be an effect. We must conceive its state at any moment to be the immediate cause of its state the next moment. But we cannot conceive its state at any moment to be the ultimate cause of the subsequent state. Hence we must look for its ultimate cause beyond itself. Now, matter we have seen cannot originate anything new. Hence the ultimate cause of all things must be the voluntary act of an eternal seat of power, a spirit. Hence the first being must be the author of the first cause.

6. In perception I descry a Supreme Being. For a feeling of something arises in my mind. By intuition I descry the existence of a quality causing that feeling: this is perception. By a farther intuition I descry the existence of a contingent substance, in which that quality resides: this is a second step of perception. And by an ultimate intuition I descry the existence of a necessary being, on whose will that contingent substance must depend: is not this a third step of perception? It belongs to perception to recognise a quality and a contingent thing. It is simply the part of a higher perception to descry a necessary being behind that merely contingent thing. Thus I apprehend the necessary Being.

7. In perception I am aware of a being at present affecting me. But if two things were absolutely independent, there is no assignable reason why they should affect each other. Now it is a matter of constant experience that the things around me actually do affect me, and one another. Hence it follows that they and I must be dependent on a common independent being, in whom I live, and move, and am. This being may affect me either mediately or immediately: mediately through another thing which he has made. The simple circumstance, therefore, that another being affects me, raises the question, whether this being has made me or I have made it. If I have not made it, nor it me, I am compelled to acknowledge a Supreme Being in whom I and the other have our existence, unity, and connexion. Interaction therefore implies an Absolute Being.

8. The Author of all dependent beings must have the attributes of reason, will, and power. For I am myself

rational, and I have discovered the rationale of much of the world around me ; and the human race have been discovering that of more of it from generation to generation, and we have discovered nothing contrary to reason in it. Now, if a part of existing things be rational, and a greater part has been found to have a rationale, it is necessary that the Author of it be rational. For nothing can rise above its own level. Now a great part, if not the whole, of things has a rationale, and consequently the Author of it must be rational. The universe is, moreover, dependent, and therefore had a beginning of being ; and hence the Author has a will. It is an effect, a result of power ; and hence the Author is He to whom power belongs. The order of things, moreover, displays uniform marks of design ; and a designer implies wisdom, will ; and power. Now a rational, free, potential Being is a spirit. Hence the Author of all things is a spirit. The above considerations go to prove, singly and collectively, that there is a God, and that He is a Spirit.

9. There must be One Author of all things. For we have already met with three grounds of the unity of things. Sensation unites the objective and the subjective, or matter and mind. Memory unites the past with the present. Gradation unites the whole series of things, from man to the mineral. And we have no reason to suppose that man or any creature is at the head of this gradation. And we add that gravity makes all the universe of matter akin, and that chemical affinity proves a wondrous concatenation of all material things into one. It is manifest that all these are fundamental grounds of a unity of things. They point decidedly and necessarily

to One Omnipotent Designer and Determiner of things. They concur to prove the unity of God.

10. Faith in testimony confirms this conclusion. History informs me that God created the heavens and the earth; a statement quite in harmony with the fact that man, by his intuitive and observant powers in their utmost reach, describes the Author of all things in His absolute and spiritual nature. The testimony of history, however, is not limited to the mere fact of His having created the universe. It is a record of His occasional manifestation to man, and of His constant dealing with him as a rational and accountable creature, capable of knowing, loving, and serving Him. This history has been criticised, questioned, and disputed, as was to be expected in a world like ours; but it has never been discredited. And the cautious, candid, and intelligent examination of its claims and contents has served only to establish its authority and enhance its worth. Experience, therefore, and history agree in attesting the existence and essential character of God.

It may be a question whether all of these distinct proofs or arguments involve a process of reasoning. Some will insist that reasoning is implied in all of them. Others will affirm that some, if not all, are mere facts of intuition. This, however, is a question, not about the validity of the arguments, but about the nature of the reasoning. On this comparatively insignificant point it is not worth while to raise a discussion. But it is proper to remark that the reasoning, if such it be, is of the simplest kind. It is akin to the kind of reasoning which some detect in perception itself. And hence the apprehension of the existence of a Supreme Being may

be regarded as a higher kind of perception. On the occasion of sensation I discover, by an act of intuitive reason, the existence of external things. It only needs another act of intuition to descry the necessary existence of an eternal, absolute Being, who subsists by Himself, and is the Author of all derived existence. Hence the Author of my being is not very far from me, even in regard to my cognitive powers. It is to be observed that the above is a mere outline, expressed in concise terms, of what might be expanded into a full exhibition of the evidence open to our observant powers of the existence of God. And to this might be added the ever-growing series of conclusions drawn by our reasoning powers from the history and nature of man, and of the world which has been prepared for his habitation. But these brief hints must suffice for the present treatise.

CHAPTER XII.

METHOD.

The syllogism enables me to arrive at the last fragment of isolated truth open to man. The understanding in all its compass is now before me : observation is ready to gather a growing treasure, not only of things, but of facts ; and imagination is at hand with its rich and fair array of ideals of both. I am therefore prepared to start on the career of life as an intelligent being. As soon as I have laid in a stock, slender though it be, of the materials of thought, I am prompted both by reason and necessity to note their correlations and make use of them for my various occasions. The apprehension of

the natural order and mutual adaptation of these materials, as parts of a cosmos, or as means to an end, is evidently the climax of the intellectual function. The process is technically called method, which is the second and crowning part of logic ; and the special faculty of method may be designated constructiveness.

Reason is peculiarly the faculty of principle or law. The inner world of man's soul is the scene of law ; and the outer world of nature is found to be only another and a broader stage on which the principles of a higher reason are playing their part. Hence every process of the human mind or of outward nature is simply the evolution of a certain law flowing from reason, the common fountain of all principle. And if the development and concatenation of principles springing forth within the human breast be so vast and various, what must we expect from the free and boundless versatility of that higher reason which holds under its sway as well the heart of man as the universe of nature, of which that forms only a minor part. Now, in the arrangement of the great Disposer, man, with his observant and organising reason, is set over against the observable and organic world, formed and regulated by a free, potential, and eternal reason. He cannot but construct, methodise himself, his own inner world ; he cannot but endeavour to comprehend the structure, method, principle, and law of nature without, or at least of some accessible parts of the same ; and he cannot but apply the inner and outer principles he has discovered to all the emergencies of life, from the transient impulse of the day to the fixed purpose of a perpetual existence.

Here, then, are the two departments of method to a

creature like man—first, Theoretical Method, which is the product of the intellectual faculty, observant of the universe of things, branching out into Subjective Method, by which we come to understand and put together more and more of the inner harmony of our nature, and Objective Method, by which we analyse and construe to ourselves the design embodied in the whole of the outer world; and second, Practical Method, by which the systematic knowledge we have thus acquired of these two counterparts of the universe of things is applied to the purpose in hand or the business of life. Of these three methods, the first culminates in metaphysics, the second in physics, and the third in ethics. Any treatise on the mind, as far as it rests on sound principles, is an example of the first. A sketch of the outer world, if it could now, amidst the wealth of our physical science, be written, even in the most meagre outline, would exemplify the second. The autobiography of a single individual, if honestly and ably written, would present a valuable specimen of the third. Here we are to treat of theoretical method.

The key to all method is the fundamental principle of that which is to be methodised. Every product of reason has a law according to which it is constituted. To comprehend the method which pervades it, we must ascertain this law or germinating principle. It may be potential, regulative, unific; it must involve at least the last of these qualities. It may be simple or complex; but if complex, it must have within itself a simple principle that binds it into a unity. Among these constituent principles are to be found mind, matter, every species of mineral, plant, and animal. Any quality, and

especially any relation, may be made the subject matter of a treatise, and therefore the regulating principle of its method. In this case the principle is in our possession, to begin with. But in mind and matter, and their various species, we have to discover the governing principle from which their qualities or processes are derived.

To discover the essential principle of any real thing we avail ourselves of certain relations, which, in the application, may be called laws of method. The chief of these, to which indeed all may perhaps be reduced, are reason and conclusion, means and end, cause and effect. Reason and conclusion form the logical sequence, which belongs to all sound works of the understanding. Means and end make the sequence of design, which is exhibited in all the plans and devices of the purposing will. Cause and effect constitute the potential sequence, which is exemplified in all the products of active power. These three relations are the steps by which we penetrate into the nature of things. We apprehend reasons and infer the consequences which they involve. We examine the means, and estimate the ends they are fitted to achieve. We observe effects, and thence descry causes, qualities, and things. By the first of these we advance from principles of intuition and facts of experience, which are the reasons, to consequences which are themselves in turn reasons warranting other consequences, until we arrive at the final consequence. By the second we proceed from means to ends, which are only means to a farther end, until we reach the highest end of which we can form any anticipation. By the third we ascend through unnumbered converging paths to the constituent principle, each new effect indicating a new quality of

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the thing in question. It is manifest that these are the fundamental laws of all method.

These concatenating relations admit of two directions in which to move, from the antecedent to the consequent, or from the consequent to the antecedent. The former is called the way of synthesis, the latter that of analysis. Analysis is the preliminary step to method, which is in fact the synthesis of that which has been duly analysed. The theorem that the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the other two sides may be regarded as the crowning achievement of the first book of Euclid. If the enquirer wish to determine the validity of this proposition, he must proceed from the consequence to the reason, that is, from the conclusion to the premises of the final syllogism, and from these premises, regarded as conclusions, to other premises that warrant them, and so on until in every line of argument he arrive at first principles. He will then have analysed the statement to his own satisfaction, and will be prepared for the synthetic process, which is to construct on the basis of the axioms the first book of Euclid, or a similar treatise, the acme of which will be the proposition in question. This will be a specimen of logical method. In like manner we may proceed from the end to the means by which it may be attained, and, if necessary, from these, regarded as intermediate ends, to the means adequate to their accomplishment, and so on until we arrive at means within our immediate power. From these we are now prepared to go from step to step until we reach the ultimate end we have placed before us. The synthesis of our proceedings will be the method of our mental activity.

And so also with the relation of cause and effect. We are acquainted with innumerable effects for which there must be adequate causes ; and these again may be effects of other causes, until we arrive at the first cause, the potential fiat of the Almighty and Eternal Being. We can form some dim conception of the transcendent synthesis we should have to construct, if we could trace every series of causes and effects up to the one first cause, and so master the problem of the universe.

In the treatment of real things this first process is necessarily analytic. The human student of nature, not being its author, and therefore not knowing, *a priori*, its essence, can only proceed from effect to cause, and thence to quality and thing. And as he cannot be sure of having ascertained all the qualities of any thing, his analysis, and therefore his synthesis, must be defective. The analysis, however, which man makes of himself is capable of a nearer approach to perfection than that of matter, because he is the subject of self-examination. Hence the method of anthropology is more within our reach than that of cosmology. In treating of means and end there will be a similar incompetency if the plan be not our own, but that of another. But in treating of an abstract relation, as quantity, duty, or self-evidence, analysis may go so far as to determine the fundamental principle, and therefore the synthesis may be virtually complete.

When the three laws of method already mentioned have guided us by analysis to the constituent principle of the thing under examination, definition and its twin sister, division, have an important part to play in the process of synthesis or method. The definition of a

thing contains the key to the whole theme, the master thought which grows into the complete science, the prolific germ which governs the entire development. It is the expression of the constituent principle of the thing in hand, and has been elaborated as far as possible by the previous analysis. Having duly ascertained and defined the essential principle, we are prepared for the division of the whole into its co-ordinate parts, for the definition and correlation of these parts, and for their subdivision into minuter parts, and so on till we come to the minutest elements of the whole. This yields the plan or method of the whole science.

Having thus arrived at the laws and processes that are involved in method, we proceed to make some general application of them. Single objects have been noticed by the observant powers, and particular relations have been ascertained by the judgment and reasoning power. But the rational faculty does not stop here. These objects and relations lie before the mind, so far as our examination has yet proceeded, in one respect, as the hewn stones fitted to one another and prepared for building, but in another respect, as the several stones of an edifice actually erected, which have been hitherto regarded only piecemeal and in their single relations one to another. It remains to rationalise the whole building, or as much of it as the narrow vision of man is able to take in, in order to comprehend the collocations and correlations, not only of stone to stone, but of part to part in the aggregate structure. Thus we are to arrive at a theoretic or scientific method of things. In the universe, that great edifice of omnipotent reason, man has made but a very little way in grasping the governing

principle pervading the whole ; yet by his very constitution he is impelled to seek after the sufficient reason and the general law of all that is presented to his observant powers. And the numerous particular sciences that have been brought to comparative perfection are a conspicuous proof of the constructive power of human reason.

In theoretic method, amid the overwhelming multitude of things that spread themselves before the view, the first step is to choose a subject for investigation. Here the first recommendation is that it be simple. The simpler the theme, the more suitable for the earliest flights of imaginative reason. Next, let it be familiar, that is, obvious or within easy reach of the observant powers : otherwise its abstruseness may mar its simplicity. And, lastly, let it be in keeping with our turn of mind, walk in life, and time of leisure. In this way we shall have a fair prospect of perseverance and success in the pursuit. Even after the subject has been selected, it must be approached on the side most accessible to the mind.

A twofold process will now take place : first, analysis, and then synthesis. We must carefully take asunder by the means aforesaid the clockwork of nature, marking the relation and connexion of every piece, if we want to comprehend the plan, structure, and end of the whole. When this has been done without violence or disorder by the hand of reason, we are prepared to construe to the same extent the rational order of the whole subject. The opening of our investigation into the scenes of nature, or at all events the prosecution of it for a little way, will raise questions, and may at the same time

suggest first principles. The latter are to be collected and arranged according to their natural order, to form the basis of our future synthesis. A question arises for solution when the state of the matter involves a fact that has not yet been ascertained. This fact must be sought for by observation or experiment. If in any way complex, it is to be resolved into its elements, and these are to be traced either to a self-evident principle, or to another antecedent fact, itself needing, it may be, in turn to be investigated and traced to its roots. As soon as we have arrived at a simple principle or a fundamental law of nature in every branch of the enquiry, we have answered the first question. And at the same time, by the way, we have ascertained, formulated, and connected some of the theorems involved in our science. Other questions as they arise will await their answer by a similar process.

The process of analysis here indicated is going on every day, with more or less continuity and intensity, in every mind. Any one line of it evidently subsumes one fact or principle under another, until we reach a first principle, or ultimate fact. This principle or fact lies at the basis of the science, and the derivative or complex facts through which we have reached it are parts of the superstructure which is to be erected upon it. If the investigation has been conducted with a rigid regard to well-ascertained truth, we shall at length, though it may be by slow degrees, arrive at the real basis of our science. If, however, a hypothesis be formed, apparently sufficient to account for the state of things in question, but not yet known to be founded in fact, there is a great danger of gliding into the assumption that it

is true, or at least more probable than the grounds will warrant. Our science will in that case rise no higher than a theory, more or less plausible, but liable to be subverted by the next more acute observer, who may detect the weak point in the seeming stronghold. When Thales assumes that water is the first principle of all things, Anaximander earth, Anaximenes air, and Heraclitus fire, we discern the tendency of human reason to seek the ultimate cause of all things, which is the very problem of philosophy. But when each in turn assumes some more or less simple element to be the first principle of things, we see a conjecture of fancy put forward as a tentative hypothesis, and hastily allowed to assume the position of a theory without any adequate observation or experiment. Hence the speedy downfall which awaited each of these airy castles in succession. When Anaxagoras, on the other hand, postulated a mind (*νοῦς*), as the regulator of the world of things, he leaped at a conclusion eminently worthy of human reason, and alone adequate to account for the order and connexion of the universe; but he at the same time left behind him the problem of a science of nature, in the sublime pursuit of a science transcending nature and dimly descrying its primary and extrinsic cause. But the less that is known of the science of mind or matter, the less can be known of the character of its ultimate Cause. Hence we must betake ourselves to the patient and exact investigation of fact by observation, experiment, and deduction, if we are to make any real progress in apprehending the foundation and superstructure of any fabric of nature.

When the process of analysis has been followed out to a fundamental fact in every line of investigation, we are

prepared for synthesis, the proper and crowning achievement of the theoretic method. This is the consolidation of the whole mass of truth regarding the given subject into a system, where each fact stands in due relation to all others, and the whole, in its native symmetry, rests upon the solid basis of simple and ultimate truth. A science which is a true mirror of nature, or any part of it, resembles a tree in its full maturity. The roots are the fundamental causes of the science, the stem the compact central truth which binds the whole into one, and the branches and leaves are the germinating facts which grow by a natural process from the all-sustaining trunk. Analysis begins with the fruits, the blossoms, the leaves; traces them to the branches, their generating causes, and these again to the main trunk, in which they have their unity and vitality, and at length descends to the roots, which the vital principle puts forth to receive its nourishment from the earth. In synthesis we pursue the opposite course. Having ascertained the root, or radical principle, we trace the fundamental causes which it gathers into its hands in the central stem, expound the divergence into branches and twigs, describe the growth of leaf, flower, and fruit, and thus construct the science under consideration, in all its harmony and completeness, up to the present hour.

When we proceed, however, to put into articulate speech the scheme of a science thus synthetically arranged, we have to submit to the defect of presenting its several details, not all in their actual collocation, but in succession, as the specifications of a plan. If these sections, however, be clearly defined and duly subordinated, the intelligent reader will be able to construct

for himself the corresponding divisions of the science into an organic whole. The exposition of the science of quantity in written treatises is the most perfect example of this defect, and of the manner in which it is got over. Quantity is discrete, or continuous. The science of discrete quantity is particular or general, arithmetic or algebra. Continuous quantity includes the line, the angle, the surface, and the solid. The line is straight or curve. The surface is plane or curve, and bounded by straight or curve lines, or both. The solid is bounded by plane or curve surfaces. These subdivisions cannot, however, be advantageously followed in any scientific treatment of quantity. Euclid treats in the first book of the *Elements* chiefly of the line, the angle, the plane, and their combinations; in the second, of the rectangle; in the third, of the circle; in the fourth, of regular polygons; in the fifth, of proportion; in the sixth, of the application of proportion to plane figures; in the seventh, eighth, and ninth, of arithmetic; in the tenth, of incommensurable quantities; in the eleventh, twelfth, and thirteenth, of solids. Four books on conic sections are ascribed to him, and it is believed that he was acquainted with this branch of geometry. But from the *Elements* we see how one branch was treated after another, according to convenience or necessity, and how several relations of quantity are combined in one treatise. In spherical trigonometry, algebra and its applications to geometry, and the calculus, are found most of the subsequent contributions to this science. When all these are put together, we have a series of separate treatises on the several parts of the great science of quantity, which the rational faculty can set in their proper places in the system.

Where several sciences have been more or less fully developed, the mind rises to the contemplation of a universal science, which is capable of being divided and subdivided into a great number of particular sciences. When we are conscious of being ourselves rational agents, and conceive the universe in which we are comprehended as the work of a rational agent, we come to see that the science of potential reason is the all-inclusive science, the development of which into its ultimate, actual, and possible consequences would give the system of the sciences, determined *a priori* and contemplated in their mutual relation. This great scheme of the knowable would naturally divide itself into three parts. First is the great principle or rationale, which pervades the universe of the possible. This is only to be found in pure reason, the exposition of which is pure science properly so called. Second is the choice or determination of what was to be and has become actual out of all that was possible, the elucidation of which is the law of liberty. Third is the potential cause of the development of this choice in reality. This is the going forth of power guided by reason; and the delineation of this process of development is history, or, antecedent to the event, prophecy, which is the specification or hint of a plan. These are in brief the principle, the purpose, and the process, springing from the reason, the will, and the power of the Great Supreme, and giving scope for the three great departments in the applied science of an actual universe, which may be called science, law, and history, or metaphysical, ethical, and practical philosophy.

When we descend from the supreme reason to the observable world in which we dwell, we find that the

transcendent metaphysic of the only Potentate has begotten a two-fold offspring—the inorganic and the organic, the fixed and the free, the insentient and the sentient,—known to us as the law of matter and the law of mind, giving rise to the two sciences of matter and of mind. Mind, being the created image of the Eternal Mind, has the same three-fold faculty of understanding, will, and power, yielding the three branches of mental science, metaphysics, ethics, and practics. As matter, being a product of mind, has three counter properties, law, need, and force, it may be said to have three counter sciences. But as mere bondage does not furnish a science corresponding to ethics, we find only two branches of material science, physics and dynamics, the former treating of the laws of nature, and the latter of the forces belonging to inanimate matter.

When we think of being, we find that it implies property and relation. Property necessarily involves being: but some relations may subsist, whether anything be or not. Hence in the spheres both of matter and mind, we have a two-fold division of science into that of properties and that of relations. Any property or union of properties may, if the purposes of man require it, be made the subject of a special science, and so may any relation or set of relations. It is evident that the sciences founded on the respective properties of mind and matter may be extremely numerous and diverse. The three relations of (logical) sequence, duty, and quantity are the subjects of the three important sciences of logics, ethics, and mathematics. The first belongs to the understanding, the second to the will, and the third stands related to the power, inasmuch as this is the

source of motion, the sphere of which is space and time, two of the forms of quantity. The first is related to law, and the last to force, which likewise originates motion. It is obvious that mathematics is divisible into a vast assemblage of sciences, distinguished by the kinds of quantity to which they refer. Ethics includes private, domestic, civil, international, and religious duties. Its principles are generally expressed by the term law. Logic is a simple science, of which every other science affords a separate example. Its parts are reasoning and method.

Sciences founded on the properties of things follow the subdivisions of matter and mind. Matter is divided into inorganic and organic. Inorganic matter may be considered as a congeries of globes, whence astronomy, the science of the heavenly bodies; as a single globe, such as the earth, which gives rise to the sciences of geography and geology; as a smaller mass, whence mineralogy; as a medium of motion, whence mechanics; as a compound of a definite number of simples, whence the science of chemistry in all its branches. The three states of matter, solid, liquid, and gaseous, afford subjects for several sciences. Light, heat, and the other forms of this subtle class of qualities, yield us many sciences. Organic bodies are plants and animals, of which the sciences are botany and zoology. The human body has been minutely examined, and hence the departments of physiology, pathology, anatomy, osteology, neurology, optics, acoustics, and the like.

Practical method will be noticed under the head of power, the potential and therefore practical faculty. Method, in general, has not received that attention in

the treatment of the mind, in the art of logic and in the process of education, which its paramount importance demands. It tends to give a practical character to the training of our schools and colleges, and to fit the highly-cultivated mind for the business of life. A certain degree of it is essential to success in the pursuits of the mind, and serves to distinguish the man of progress from the busy lingerer. Its value will be still more apparent when we come to consider practical method or a systematic habit of mind.

PART II.

THE WILL.

THE will is the chief, the ruling faculty of man. Informed by the intellect and governing the power, it stands in the centre of the soul, silently controlling all the vital and instinctive functions, as well as consciously regulating the intellectual and active powers. The healthy action of the will is, therefore, of transcendent importance to the well-being of man.

The chief functions of the will are, estimating, inclining, and willing. Estimating is a kind of judging. It refers, however, not to the reality of things, but to their bearing on happiness and holiness. It is the attaching of a value, favourable or unfavourable, to the object that engages the attention. It is the rationalising of emotion. It therefore presupposes emotion and intuition. It takes cognisance of the affecting and the moral. Hence arise two co-ordinate departments of the estimating faculty—susceptivity and conscience. The affecting and the moral, which are gauged by these two powers, are the springs of inclination, the motives by which the will is swayed. Willing follows what is the leading motive to the individual at the time. Of these functions of the will, estimation borders on intellect, and volition on power.

Hence the exercise of the will involves estimation,

susceptivity, conscience, inclination, and volition. Before these we must place susceptibility, the seat of emotion, the capacity of the soul to be affected agreeably or otherwise by the objects of contemplation.

CHAPTER I.

EMOTION.

Susceptibility is the capacity of the mind to be affected, in the way of pleasure or pain, by that which is before it. An emotion is the thrill or flutter of excitement which attends almost every object of experience or consideration. It stands to the estimate we spontaneously form of the object in much the same relation as the sensation to the perception of the same. It is a rude stroke, felt, but not yet fully construed, by the mind. It is the emotional, as distinguished from the sensible feeling of the object. Emotions are of three kinds; some of them agreeable, some disagreeable, and some indifferent. The agreeable and disagreeable may be said to be of one genus, running through all possible degrees, from the highest intensity of the agreeable to the like extreme of the disagreeable. In the case of the senses, the mind locates the mere sensuous source of the emotion usually in the organ affected, and ascribes the quality producing it, usually called by the same name, to the external object which causes the emotion. Thus sweetness, felt by the tongue, and applied to the taste and to the sugar which is tasted, generally produces an emotion of pleasure in the taster. Emotion, however, is not confined to objects of sense, but is felt in some

degree on any object whatever being presented to the mind, whether thing, quality, relation, event, action, or passion. Hence it appears that emotions are vastly more numerous than sensations, as they accompany objects of consciousness, memory, and imagination, as well as those of perception.

It is a highly interesting fact, that by the constitution of our mind we have the power, not only of noticing objects, but also of experiencing a certain feeling of pleasure, pain, or excitement from them. This fits us for being not only conscious of existence, but capable of happiness. Our sensibility to pain as well as pleasure has the effect of warning us to avoid things that are injurious to health or happiness. It is so ordained, that things hurtful in themselves are generally painful to the sense; and in this way we are guarded against harm. This holds good to a very remarkable extent among the lower animals, that are guided by instinct alone. They are generally qualified by nature to select what is wholesome and reject what is baneful. Rational beings are left more to observation, and learn by experience to discern between good and evil.

The question why things injurious to health, poisonous minerals and plants and venomous animals, have been called into existence, does not come at present into consideration. It is beyond a doubt, from what we already know, that every creature is advantageous, and even agreeable, when applied to the use for which it was designed. But the general question can only be of importance and meet with a satisfactory answer when we contemplate the existence and character of the moral Author and Governor of the universe.

It is absurd to elevate mere emotion into a primary faculty or capacity of the human mind. It is merely the elementary starting point of the second great department of mental activity. It cannot generate or account for all, or any considerable part of all, that occurs in that department. It is not therefore fitted to stand at the head or determine the name of any leading function of the mind. It stands to the will as sensation to the understanding. Sensation has not the slightest claim to be exalted over the intellect, of which it is simply the most elementary function. Still less right has emotion to preside over the will in the primary distribution of the mental faculties. For sensation introduces us to the existence and essential character of external things; while emotion only yields the element on which the value we attach to every object of contemplation is founded.

But it is still more incongruous to co-ordinate emotion and will as two of the primary powers of the mind. It is obvious that emotion is but the first budding of that full-grown development by which the essential character of the will is displayed. If a man choose to arrange the powers of the mind under the heads of sensation, emotion, and impression, he has a method in his fancy. But to introduce a mere root of the will into the same category with the will itself is to violate a fundamental law of good division, and to import darkness and confusion into the philosophy of the mind.

The emotions are endlessly diversified in their character according to the sensibility affected or the cause affecting it. The susceptibility of emotion accompanies not only the senses, but all the functions of the will and the

power, as well as the understanding. The causes affecting it are of course equally various. Percepts, concepts, judgments, and conclusions, all the objects of the mind, awaken corresponding emotions in the susceptibility. We shall notice only four classes of emotions which are very plainly distinguished.

1. PLEASURE AND PAIN.—Pleasure, strictly so called, is the emotion of comfort or delight that accompanies certain states of the body and conditions of the things around us, as well as the different objects and frames of the mind. Akin to this is *joy*, the strong feeling of gratulation which agitates the breast on the arrival of some good tidings, or the attainment of some desired end. *Grief* is the contrary feeling of disappointment awakened by the announcement of some calamity, or the sudden pressure of some evil. *Enjoyment* is the state of agreeable feeling occasioned by the continuance of some good : *gloom* is the opposite condition of mind. *Satisfaction* expresses the coolly discriminating feeling with which we regard a useful object, whether in itself pleasant or not. Each of the pleasant states of mind has its corresponding opposite.

2. COURAGE AND COWARDICE.—Courage is the emotion excited by the present determination to face danger. The risk is undertaken either to defend life, liberty, property, chastity, honour, or religion, or to attain a cherished purpose. This is one of the keenest, strongest, and sometimes loftiest emotions that can stir the breast of man. There is a pleasure of the intensest kind involved in this emotion, though quite distinct from it. Cowardice is the opposite state of feeling.

3. COMPLACENCY AND DISPLACENCY.—This is the social

emotion. It has its root in the gratification which we feel in concurrence of any kind, and therefore in companionship. To dwell, talk, walk, work, laugh, weep, feel with another, appears to be a bent of our nature. This rises to the stronger feeling of *congeniality* when my companion has common tastes, dispositions, sympathies, or emotions with myself. Complacency refers especially to unanimity with another in moral character. It culminates in friendship, which is one of the most exquisite pleasures of life. *Gratitude* is the feeling of thankfulness to him from whom I have received good. *Ingratitude*, the absence of this feeling, meets with instant condemnation. The emotion which gives rise to the social feeling, though accompanied with pleasure, is yet distinct from it.

4. APPROVAL AND DISAPPROVAL.—Approval we apply to the emotion that accompanies the moral judgment, or the conviction of the goodness of an act or of a character. It is moral or judicial commendation. Along with these feelings go acquittance and condemnation. Acquittance is deciding that a person is free from guilt. Condemnation is accounting one guilty, or abhorring wrong. It is obvious that there is a refined sense of pleasure or pain in these opposites; the former of which may be expressed by complacence and the latter by indignation. But beyond this there is an imperative intuition, a sense of obligation involved in moral approval, which transcends and dignifies the mere pleasure which accompanies it.

CHAPTER II.

ESTIMATION.

Estimation is the valuing faculty, by which we attach an estimate to every object of the mind, whether real or imaginary. Every estimate rests on an emotion more or less vivid accompanying the object and construed by the intuition. The estimate thus formed is closely analogous to an intuition of quality; and in so far as it refers to a quality in the object which awakens the emotion, it is in reality coincident with intuition. The intuitive power we have found coming into play in connexion with every source of mental activity. Hence we may naturally expect to meet with it on the occasion of emotion.

The intuitions which emotion calls into consciousness are of two kinds, the affecting and the moral. The affecting is either selfish or unselfish. By selfish we here mean having a relation to self, without necessarily involving anything morally wrong. Of the selfish there are two kinds; the pleasant and the useful. Of the unselfish there are four principal species; the certain, the free, the social, the brave. Of the moral we may distinguish three; the due, the true, and the good. These are properties of things, persons, or actions, that come into the view of the intuitive reason on the occasion of that emotion which attends every sensation or apprehension. They may be called the valuable qualities in contradistinction to the sensible qualities, inasmuch as they are those on which a value is put by the estimating

faculty. They affect the susceptible part of our nature, and thereby make themselves felt and appreciated by the estimating power. The estimates are usually called by the same names as the emotions on which they are founded.

I. THE SELFISH ESTIMATES.—1. The *pleasant* is that which is agreeable in any object of the mind. It forms an element therefore in everything on which the mind sets a value. In a large department of things it may stand almost alone before the attention when adverting to their relation to the feelings. Tastes and smells are examples of this description. We are susceptible of the emotion of pleasure; and nature surrounds us with objects and events, the contemplation of which calls it forth. The opposite feeling is called pain.

2. The *useful* is that which serves a good end. It may or may not be pleasant in itself. Thus food is useful, and so is medicine. The former is pleasant, the latter sometimes disagreeable. There is, however, a certain kind of pleasure in the useful; and many things are pleasant solely on account of this ulterior advantage. Money is comparatively indifferent to us, if we regard the impression the mere metal or paper makes upon us; but it is exceedingly agreeable on account of the thousand uses to which it can be put or pleasures it can purchase.

The union of the useful with the pleasant yields what may be properly called the physically good. This combination at all events is not very uncommon in nature. If we had learned the right use of the various objects and operations in nature, it would, we have no doubt, be found constant.

II. THE UNSELFISH ESTIMATES.—3. The *certain* is the known, in contrast with the uncertain, which may include the probable and the purely unknown. This corresponds to the intellectual part of our nature. It is an obvious source of pleasure to a well-balanced mind, as it gratifies the principle of curiosity. It is also in the first instance the new, and therefore comes to us with all the charm of freshness. It is, moreover, the true, in contrast with the false or the doubtful, and is therefore congenial to the mind. The probable affords only a shade of the same kind of pleasure. This is the attraction to which we owe the term philosophy, which is itself derived from the love of wisdom.

4. The *free* is that which has the power of will or choice, or which is done in virtue of an intelligent will. The exercise of free-agency is an obvious source of delight, as the involuntary or the compulsory is an object of indifference or dislike.

5. The *social* involves the relation of companionship. It takes in co-operation, conversation, community of feeling, interchange of thoughts, words, and deeds. It is presupposed in the moral, which involves the relation of one person to another. The free and social stand related to the will, as the certain to the understanding.

6. The *brave* is that which dares or is dared, with the consciousness of power, for the attainment of a favourite object in the face of danger. This confidence of power in the midst of peril is accompanied with strong emotion.

III. THE MORAL ESTIMATES.—The *due* is that which I owe to anyone or to everyone who comes into contact with me. It is, like all intuitions, a simple relation, which can be learned only from experience. It is the

field in which the moral faculty finds its exercise. It has three forms claiming a separate enunciation.

7. The *right* is that which is due to another. It refers in a special sense to conduct or disposition. It is right to refrain from that which does not belong to me. The contrary is wrong.

8. The *true* is that which agrees with the reality of things, or expresses the real sentiments of the speaker. The true, like the useful, may be in matter either agreeable or disagreeable: it may in some instances be unfavourable to our immediate interests. But apart from personal concerns there is a pure and lofty delight in truth, whether of thoughts, words, or deeds. Knowledge, whether in science or art, the philosophy of things, can never fail to have a peculiar attraction for the intelligent mind; and honesty of purpose and of speech commands the spontaneous esteem of the ingenuous heart. But a sublimer principle than mere delight comes into operation when we have to do with truth of purpose. Duty, the categorical imperative, demands of us the truth with an inherent authority, which we are constrained to acknowledge. Approbation is the feeling with which the moral judgment regards allegiance to the truth; while falsehood draws forth immediate condemnation.

9. The *good* is that which love prompts. It goes beyond the right, which is all that justice or equity demands. The opposite is evil. These moral intuitions will be discussed and followed out when we come to the moral faculty.

The apprehension of the character which the emotion excited gives to the object of contemplation leads at

once to the grand discrimination of things in general into the physically good and evil, and of voluntary actions, dispositions, and individuals into the morally good and evil. The appreciative faculty has accordingly two correspondingly diverse departments, one of which may be termed affection, and the other conscience. Affection must here be used in a large sense, to denote the power of appreciating the selfish and unselfish emotions which arise on the contemplation of things. It judges, therefore, of the pleasant, the useful, the certain, the free, the social, and the valiant. Conscience judges of moral obligation. It therefore decides upon the due, including the right, the true, and the good. The appreciative faculty involves a discrimination and classification of things, according to the emotional intuitions which they awaken. We have now to consider apart the susceptibility and the conscience.

CHAPTER III.

THE SUSCEPTIVITY.

Having considered emotion, which corresponds to sensation, and estimation, which is parallel to intuition, we come now to the two great departments of estimation—the affection and the conscience—which we have to unfold more at large. Under the susceptibility we have to consider the selfish and unselfish estimates of things. The former are pleasure and utility; the latter, certainty, freedom, sociality, and bravery.

I.—PLEASURE.

The physically good, in a strict sense, is that which yields the emotion of pleasure. This pleasure may arise from the object of perception ; but it may also come from that of consciousness, memory, or imagination. It may be derived even from the judgments and inferences of the reason, the inclinations of the will, or the movements of the power. Either pleasure or its opposite is, therefore, received from every object of the mind, whether real or imaginary, abstract or concrete. Hence all these objects may be called good or not, according to the pleasure which they give or the pain they occasion to the observer, the patient, or the agent. Goodness in this sense is merely the quality by which any object affords pleasure to him who is occupied with it. The pleasures which are received through the emotional faculty may be arranged, according to the sources from which they spring, under the following heads:—

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|-------------------------------|---|----------------|
| I. PLEASURES OF SENSE. | { | 1 Appetite. |
| | { | 2 Health. |
| | { | 3 Taste. |
| II. PLEASURES OF INTELLECT. | { | 4 Utility. |
| | { | 5 Knowledge. |
| | { | 6 Imagination. |
| III. PLEASURES OF CONSCIENCE. | { | 7 The Right. |
| | { | 8 The True. |
| | { | 9 The Good. |
| IV. PLEASURES OF THE WILL. | { | 10 Volition. |
| | { | 11 Liberty. |
| | { | 12 Sociality. |
| | { | 13 Action. |
| V. PLEASURES OF POWER. | { | 14 Courage. |
| | { | 15 Success. |
| | { | 16 Rest. |

I.—PLEASURES OF SENSE.

The pleasures of sense are naturally arranged under the satisfaction of the appetites, health, and the gratification of the tastes.

1. APPETITE.—The chief appetites of the corporeal nature are hunger, thirst, and that of wedlock. The two former begin with the birth, and last as long as health or life. The latter comes with maturity. They afford some of the most intense emotions of pleasure or pain. The constitution of our nature is such that the due gratification of hunger and thirst yields not only an occasional delight, but a constant and complete satisfaction, while the want of this seasonable gratification is attended with various degrees of discomfort, from the uneasiness of unsatisfied longing to the racking pains of absolute inanition. These appetites are so urgent in their demands that the dissolution of the animal life is the inevitable result of a few days' abstinence. The sexual desire, on the contrary, is of such a nature that it may, in ordinary circumstances, be wholly repressed without prejudice to health or happiness. Heat and cold, within certain limits, are pleasurable sensations, and even necessary to animal existence; but beyond these limits they are uncomfortable, and may become indescribably painful, and at length destructive to life. The cutting of the skin, the bruising of the limbs, or the rending of the flesh is attended with instant and acute pain, and may be so violent and extensive as to cause death.

2. HEALTH.—The enjoyment of health of body is one of the chief sources of earthly happiness. Health con-

sists in the natural development of all the members, and the easy exercise of all the functions of the body. In addition to the absence of disease, it gives rise to a buoyancy of spirits, which fits us for the enjoyment of every pleasure and the performance of every task with an indescribable alacrity and an unwearied freshness of feeling. Hope and self-confidence reign supreme in the soul that is the tenant of a healthy body. The absence of health is called by the significant name of disease, which indicates the discomfort attending a disordered state of the bodily organs. Languor, indolence, and despondency are the result of deficiency of vital power.

3. TASTE.—This is here used in a wide sense, to denote susceptibility of pleasure from the objects of sense in nature or art. It is sometimes called æsthetics, though this term refers rather to perception by the senses. The pleasures of taste are eminently worthy of forming the subject of a separate treatise. The sublime and the beautiful in nature present an endless variety of gratification to the eye. The rumbling thunder, the roaring wave, the murmuring stream, the sighing trees, the cheerful songsters of the grove, gladden the ear. The animal, vegetable, and even the mineral world give forth their manifold fragrance to the nose. The fruits of the field afford an inexhaustible wealth of gratification to the tongue. And touch is constantly supplied with its own palpable means of enjoyment in the softness of the turf and the mildness of the air. Art is not less fertile than nature in resources for the gratification of taste. Agriculture, architecture, statuary, painting, music, design, are mainly derived from taste, and offer to it a perpetual feast. Form, antiquity, style, manner, also

come under the rule of taste, though they touch upon other functions of the mind than mere sense. A highly refined and peculiarly tranquil description of pleasure flows from all these sources.

II.—PLEASURES OF INTELLECT.

The pleasures of intellect are chiefly those of utility, of knowledge, and of imagination.

4. UTILITY.—The useful itself comes under another head. Here we have only to do with the pleasure it affords. The utility of a thing does not come to view by perception and the consequent emotion of the mind. It corresponds with the experimental qualities of things, as it is discovered by mediate experience. It consists in being the medium by which we arrive at the enjoyment of something in itself good or pleasant. When we have discovered the utility, we then begin to regard the useful object with a degree of favour proportionate to the usefulness of it. The favour or disfavour, depending on our sense of the utility or inutility of anything, is not exactly the same with pleasure or pain; but it is near akin to it, and ranges under it when employed in a comprehensive sense. It is a sort of mediate pleasure or displeasure. And some rigid minds are prone to regard nothing as pleasant unless it be also useful.

5. KNOWLEDGE.—The acquisition of knowledge affords its own peculiar gratification to the principle of curiosity. We take a refined pleasure in ascertaining the truth, in understanding the nature of things, in adding fact to fact, in discovering the general laws which regulate such facts, and in reconstructing these materials into a system of philosophy corresponding to the external scene. The

pleasures of memory are to be added to those of observation. They demand a volume for themselves. There is also an exalted delight in reaching up to the first causes of things, investigating the grand design of the course of nature, and ascending from the design of all things to the great Designer. Hence the name of philosophy has been aptly given to the propensity of the human heart to penetrate into the causes of things. And it is remarkable that even in the garden of Eden the love of knowledge was the paramount temptation, which overcame the virtue of the mother of all living. The pleasure of knowledge in itself is also greatly enhanced, when we find that we can apply science to serve our purpose in the achievements of art. The useful thus adds its attraction to the certain.

6. THE IMAGINATION.—The imagination yields an inexhaustible fund of gratification by its active as well as by its passive exercise. The wide field of invention, including the sciences and the arts, the whole realm of literature, comprehending history, mythology, fiction, oratory, poetry, and the whole range of music, with all its variety of instruments, have given endless scope and play for the excursions of the imagination. And the circumstance that all this is the result of a voluntary activity is sufficient of itself to prove that these efforts of imagination have all been sources of pleasure to the author himself. It is scarcely needful to add that all these products of human conception have afforded a perpetual source of enjoyment to thousands who have made a passive or secondary use of them. The pleasures of imagination afford a noble and a fruitful theme for an interesting and instructive volume.

III.—PLEASURES OF CONSCIENCE.

Peace of conscience is itself a good far transcending all other goods. It flows primarily from a voluntary and undeviating compliance with the moral law. All other sources of pleasure yield a temporary enjoyment. This alone constitutes real and perpetual happiness.

7. THE RIGHT in its very conception gives a pleasure to the mind. The equitable deed of another calls forth a feeling of pure delight. If it be performed gallantly, amid much temptation and at great personal risk, not only of property, but of life, it rouses the soul even of a spectator to a high pitch of enthusiasm. The righteous act done by myself fills me with the new and ineffable delight of self-respect.

8. THE TRUE creates an intense delight even in him who makes no scruple of practising deceit. An honest man is confessedly a noble object, and commands universal respect.

9. THE GOOD, as it transcends the right and the true, affords a loftier pitch of the same holy gratification. The pleasures resulting from the doing, or even beholding, a right or good deed, from the acquaintance and friendship of the good, and from knowing and loving the great God of right, truth, and love, are the most sacred and sublime of which a rational being is capable.

IV.—PLEASURES OF THE WILL.

The will is more directly connected with pleasure than any other department of the mind. Mere voluptuous pleasure consists in following out the lower propensities of the will. At present, however, we confine

ourselves to certain pleasures that are connected with the exercise of the will. The chief of these are from volition, liberty, and sociality.

10. VOLITION.—It is evident of itself that the acts of the volitional faculty are agreeable. There is a special delight in the voluntariness of an action, and a corresponding disagreeableness in that which is either involuntary or compulsory.

11. LIBERTY.—Moral freedom is the power of choice, which belongs to the very essence of happiness. It is a luxury which intelligent beings hold to be beyond all price. The inward exercise of this liberty is a privilege of which the rational soul cannot be deprived. Liberty, however, is also employed to denote freedom of action. This may be called physical liberty. To be robbed of this form of liberty and reduced to a state of bondage is among the greatest degradations which can befall a rational creature. And the noblest boon a state can secure for its citizens is the largest measure of this liberty which is consistent with the moral order of society. The blessing of liberty is a wide theme for the orator and the poet.

12. SOCIALITY.—Our senses bring us into contact with the mineral, vegetable, and animal worlds; and even this is a source of incalculable delight, though it does not rise to the dignity of fellowship. But our perceptive powers go beyond the mere range of the sensible, and bring us into intercourse with our fellow-men, and, beyond these, with the great Spirit, in whom we live, and move, and have our being. What exquisite and inexhaustible springs of delight flow from fellowship with father and mother, sister and brother, son and

daughter, husband and wife, neighbour, friend, and countryman, and, again, above all, with the Father of our spirits, it is impossible to describe. The wondrous system of language, spoken, written, and otherwise expressed, is the great medium by which we realise the boundless joys of social happiness.

Obedience to a superior involves fellowship. The dependent finds himself in a great social compact with the superior, and contributes to the attainment of the chief end of all things by the faithful performance of his own humble part. His dignity consists in being associated with all moral intelligence in the achievement of universal benevolence and blessedness.

V.—PLEASURES OF POWER.

Power has always been an object of ambition with man ; for, like money, which is one form of it, it is the means of having at his disposal a corresponding measure of all that can gratify desire. And he possesses an inestimable treasure of power in his own spiritual constitution, which it is his pleasure to be exercising in an endless variety of ways from day to day. We have here to call attention to four sources of gratification which accompany power, namely, action, courage, success, and rest.

13. ACTION is the movement of a rational free agent. It cannot but produce delight, for it involves the consciousness of intellect, will, and power. It contemplates also an end, and thereby includes all the excitement of an effort for its attainment. But all this is over and above the pure pleasure of activity itself, which is consonant with the nature of an agent.

14. COURAGE, bravery, or fortitude, is the sense of power to overcome resistance, accompanied with the determination to encounter a certain amount of danger in the attempt to attain the end in view. There is an agreeable excitement, sometimes arising to the ardour of enthusiasm, in this feeling. It awakens *hope*, which is another source of pleasure, and the opposite of despondency.

15. SUCCESS is the result of adequate power rightly put forth for the attainment of a given object. The feeling caused by success is exultation ; that occasioned by failure is depression. In proportion to the value attached to the end is the pleasure of succeeding in its achievement. The pursuit gives the pleasure of action ; the attainment yields that of success. How manifold are the pleasures even from this source to an ordinarily successful man ! How sweet to contemplate a good work accomplished !

16. REST is that repose or relaxation of the frame which follows a laborious effort or an accomplished task. Human rest culminates in sleep, which refreshes both mind and body. But not less delightful is that pause which comes when the harvest is ended, the building finished, the enterprise completed, the season of study closed, or the campaign terminated with an honourable peace. Nobody can doubt the delightfulness of such a cessation.

The above is a bare enumeration of the heads of those pleasures which this world and this susceptible nature of ours are calculated to realise. The mere survey is affecting. A wise and temperate use of these opportunities could not but produce a wonderfully happy life.

II.—UTILITY.

Prudence is the faculty by which we judge of utility. The useful, in the strict meaning which is here attached to it, is that which tends to the benefit, health, or welfare of anyone, even although the perception or use of it may not be attended with any emotion of pleasure. It is therefore the means to an end which is agreeable and valuable. This is therefore to be learned by experience; and hence the useful correspond to the experimental qualities of things, inasmuch as they are discovered, not by the direct effect of the object on the mind, but by the indirect effect it is found to have in promoting the comfort of the individual. Wealth and power, in addition to any pleasure they may create, are the means of procuring other pleasures and benefits, and therefore in an important degree useful. Machinery in all its forms is useful, as a means to an end. The arts in general, but especially the handicrafts, may be regarded in the same light. All the products of nature, besides the direct pleasure which they afford, have, we are beginning to find, an inexhaustible variety of uses to which they may be applied. The certain, the free, the social, and the brave are pregnant with many solid advantages to all concerned. And all right conduct, besides its moral character, has an obvious and important use. The senses as well as the various powers of the mind are fraught with a multitude of most precious and varied uses. The whole world of reality is from end to end a magnificent exemplification of design, of the adaptation of means to an end, and therefore of all-pervading utility. When we contemplate this glorious spectacle

we are led by innumerable lines of experience and argument to the conclusion, that the agreeable and the useful wonderfully coincide in all their details.

III.—THE UNSELFISH ESTIMATES.

The chief of the unselfish estimates are those which we attach to knowledge, freedom, sociality, and courage. There is undoubtedly a pleasure, connected with each of these feelings, which influences the selfish principle. But there is also a peculiar excitement belonging to each of them, which results in a high esteem of them apart from all selfish considerations, and leads us to cherish them warmly even in the face of a great amount of personal inconvenience. Hence they may be properly distinguished as disinterested feelings.

1. KNOWLEDGE embraces science in the widest sense. It extends also to history in all its branches. It is the feast of the understanding; one of the three primary faculties of man. Its various branches have been noticed under method. Its value has been considered under estimation.

2. FREEDOM.—It is obvious that we love to be free, even at the loss of a large amount of personal ease and enjoyment. This is the luxury of the will, as knowledge is of the understanding. It is involved in the dictates of conscience, as well as in the exercise of prudence and the enjoyment of pleasure. It has its own peculiar emotion apart from pleasure.

3. SOCIALITY calls forth some of the noblest and most disinterested purposes and struggles in which man has ever been engaged. Our home, our country, and our God

are inseparably entwined with the heartstrings of our affections. The feelings they awaken are pleasures indeed ; but they are intense emotions that stir the very pulses of our being. There is no limit to the grandeur and interest of the relations which they involve.

4. COURAGE.—Every kind of action on the part of a voluntary agent implies some degree of hindrance to be overcome. The greater the hindrance, the stronger the emotion attending the resolve to attempt its removal.

These estimates stand on the border-land between the selfish and the moral impulses. Even apart from the moral principle, they have always had a powerful influence in counteracting the tendencies of the purely selfish emotions. The pursuit of knowledge, the struggle for freedom, the love of kindred, of friend, of home, of country, of our king, of the God of our fathers, the courage with which men stand in defence of life, liberty, family, and property, have always lent a powerful aid to the moral principle in overcoming the ascendancy or exclusiveness of self.

CHAPTER IV.

CONSCIENCE.

Conscience is the moral faculty, by which we judge of duty or moral obligation. It is one of the departments of reason or the intuitive faculty. It is simply reason dealing with the first principles of moral truth. It lays down the fundamental principles and rears up the superstructure of ethical science. Ethical truth is as evident to reason as mathematical. To elucidate the conscience we will unfold the elements of a system of ethics.

The essential difference of conscience is the cognisance of duty. It acknowledges the obligation "I ought," and pronounces the categorical imperative "Thou shalt." The special sphere of conscience has its centre in the one word duty. The due may be resolved into the two departments of the right and the good. An axiom of moral truth is called a law, or, more precisely, a moral law. The simplest and most fundamental principles of morality are the following:—1. It is right to refrain from that which does not belong to me; 2. it is good to do to another as I should wish him to do to me. It is obvious that the former of these principles is included in the latter. And on these two precepts depends the whole moral law. At all events the right and the good, which are included in these positions, lie at the basis of universal jurisprudence.

Inasmuch as the behests of conscience impose on us an obligation to yield to them a prompt and spontaneous obedience, it is important and satisfactory to note that they are the dictates of reason. The due is simply the reasonable. It requires and admits of no demonstration, because it is evident of itself. It comes home to us with all the certainty, as well as authority, of intuitive reason. There is nothing arbitrary here. Because I am rational and free, I am a law unto myself. The arbitrary is the unreasonable, and therefore the wrong and the evil, the contrary of the right and the good. Under the right comes the true; and under the right and the good stands the temperate. Conscious now that the law of my life is the dictate of right reason, I enter upon the path of freedom with a confiding cheerfulness.

I.—INTUITIVE IDEAS OF ETHICS.

Having now before us the laws of equity and love, we may mark the several objects which intuitive reason calls up along with these fundamental principles. The chief of these are person, freedom, property, Creator, creature, duty, right, wrong, good, evil, law, guilt, punishment. To most of these we have referred under the heads of intuition, consciousness, and susceptibility. It is necessary, however, to recall them in the present connexion.

1. A person is an intelligent being, and therefore possessed of intellectual, moral, and active powers. The possession of reason in its intellectual and moral functions is that which constitutes a person responsible for his actions.³⁷

2. Freedom is power to choose. It is therefore involved in will. Hence it can only be destroyed by the destruction of the will. It is the indispensable condition of accountability, as conscience is its foundation. Freedom, however, is also used to denote the power to act according to choice. In this sense it is the measure of responsibility. Hence it appears that reason, which includes conscience, yields the foundation; will, which confers freedom, the condition; and power, the measure of moral responsibility.

3. Property is that which belongs to a person in the widest sense, and therefore includes not only an essential quality, but a part of the body or any external possession. Property is either absolute or relative. Absolute property is that which belongs to the absolute or independent One. It is either an attribute of His

nature, or it is drawn out of His own resources by His own intrinsic power. In the latter case it is created or called into existence by Himself, and so belongs to Him by the only absolute and indefeasible right, that of creation. Relative property is that which belongs to him who owes his being to another. It is obvious that he who owes being owes all else. Such property comes by gift, by labour, by exchange. Labour is the next best title to property after creation, but it is only relative, when all the powers as well as materials of labour are derived from another.

4. Creator and creature come under our consideration whenever we enquire into the nature of property or duty. The Creator is the absolute owner of the creature. By the same title of creation He is the absolute lord of His intelligent creatures. The prerogatives and responsibilities of ownership and sovereignty thereby centre in the Creator. And the corresponding duties as well as rights devolve upon the rational creature, who is the subject and the child of the Creator. It is obvious that a new class of duties arise whenever these peculiar relations come into existence.³⁸

5. Duty is that which is due from one to another. My duty is that which I owe to another according to the means I have in my power. Here the measure of my duty is my power; and the special ground of duty lies in the exact relation in which I stand to the other party.

6. A right is the counterpart of a duty. My right is that which is due to me from another. My right is another's duty. A property is that which belongs to me. A right is the legal or moral claim I have to my

property. Right, the adjective, is that which is just or equitable. The principles of equity are self-evident. They stand before the intuitive faculty with as much clearness and cogency as the axioms of mathematics. The law of heaven and the law of nations are but the exposition and application of these fundamental principles. Wrong is the contrary of right in both senses.

7. A good we use here in the sense of an advantage, a source of profit or happiness. Good, in a moral sense, is love or goodwill, or that which is done from love or a wish for the gratification or benefit of another. Evil is its opposite.

8. A law, in the widest sense, is a given rule or condition according to which anything proceeds. It forms a part of its original constitution or transient nature. A moral law is an ethical principle put into form, and thereby fitted for practical application. It is called a law because it lays down a fundamental direction for the conduct of moral beings (*θεσμός*), or lays off the portion or part due to each (*νόμος*). It is called a rule (*regula*) in reference to the straight line of equity which it draws and the intrinsic authority which it possesses.

9. Guilt is the ill-desert of crime.

10. Punishment is the pain or payment which is imposed as the measure of the guilt. It is also called the sanction of the law.

II.—INTUITIVE PRINCIPLES OF ETHICS.

I. The law of right is self-evident from the very terms of it. That which does not belong to me is not mine. I have, therefore, no conceivable claim upon it. I have

a right to do what I will with my own, as far as it is my own, provided always that I will aright. But I cannot go a step beyond this clear and definite boundary. I have no claim upon anything but that which is my own, and therefore no right. It is needless indeed to multiply words, except to make the meaning plain, as the matter is self-evident. It is only necessary to set forth the same principle by the counter declaration of what is the wrong. It is wrong to take (or appropriate) what does not belong to me. In this case there is no intermediate course. There is only the alternative to take or leave that which does not belong to me. I cannot do anything else than either take or leave. It is wrong to take, and therefore it is right to leave untouched. In general, however, the contradictory of wrong—that is, not wrong—includes the right and the allowable. Hence it appears that between the contraries, right and wrong, may lie the allowable. The three may be expressed by the phrases, I ought, I may, and I ought not. But it is to be remembered that while the contraries refer to the alternative of pursuing or avoiding a given course, the allowable which lies between refers to a totally different class of actions.

The principle of right assumes a more definite form when we introduce a second person. It is right to refrain from that which belongs to another. And of course it is wrong for me to take away from another that which belongs to him. The principle now involves, and therefore resolves itself into, three special maxims; the first referring to action, the second to speech, and the third to thought. They may be put in the following forms:—It is wrong to take from another, by deed, word,

or wish, anything that belongs to him ; otherwise, in the categorical imperative, Thou shalt not steal ; thou shalt not lie ; thou shalt not covet. Or again, the right contains three parts, which may be called the honest, the true, the pure. Each of the above precepts is a summary of the whole moral law, according as we refer it to the hand, the tongue, or the heart. And as the will is the fountain of all moral action, the last is the essence of all equity.

The true is the right in regard to statement. In speaking of any person, thing, or event, it is right for me to leave or allow that which belongs to it in the nature of things ; and it is wrong to take or disallow that which belongs to it. The true is in this sense simply a species of the right. I may not be competent to ascertain all the circumstances ; but I am bound to speak according to what I know concerning any matter when I speak at all. Truth in general, however, is so analogous to property, that some of it belongs, that is, refers to my neighbour's concerns, and some of it does not. The former part is that which I am bound not to withhold from him. The part which does not refer to him or his concerns I am not bound to state to him. It belongs either to myself or to some third party. In the latter case, I am clearly not at liberty to speak as between man and man.

II. The good in a moral sense fulfils the law of love, as the right fulfils the law of equity. It is good to love other beings capable of happiness, and the measure of this love is to do to another as I should wish him to do to me in like circumstances. The only limits to this are ability and equity. We have an intuitive conviction

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that it is good, on the part of him who has the means over and above his own wants and the claims of others upon him, to supply the wants of another; while it is evil, on the same supposition, to withhold relief. Our judgment approves of the one and disapproves of the other. There is a spontaneous impulse in our hearts, checked only by the claims of justice and prudence, to relieve the really distressed and to gratify the reasonable wish of another. We should like it to be so done to ourselves by another, if he had the means at his disposal. We feel, however, that we cannot claim it as a right. But we must approve of it as good, and all the more because it is not our right.

Hence we perceive a clear distinction between the right and the good. The right is both binding on me and due to you. The good is binding on me, but not due to you. The right I must and can do, and you may claim; the good I must do if I can, but you can not claim. The one is the law of justice; the other that of good-will. The latter transcends the former, inasmuch as it not only allows the right of another, but consults his good. The good admits of the same threefold division as the right, into the thought, the word, and the deed; or benevolence, benediction, and beneficence. The opposite of the good is the evil; which is properly the gratuitous infliction of pain, as good is the gratuitous bestowment of pleasure.

Love, as we have said, is the principle of the good. There are, however, three great modes of love—gratitude, complacence, and benevolence. Gratitude, a thankful sense of the kindness of another, has its proper place only in the breast of the creature who is sensible of the

benefits he has received from his fellow-creature or his Creator. It is the response or return for good-will. This, however is a right due from me to my benefactor. It cannot claim to be properly good. Complacency is the delight and approval with which moral excellence is to be regarded. It was exemplified when the Founder of heaven and earth contemplated the work of His hands, and rejoiced in its perfection. This feeling in the rational creature towards the Creator may be called reverence, and toward his worthy fellow-creature respect or esteem. This also is simply right. It does not rise to the rank of the good. The righteous and good man has a claim to the esteem of his neighbour, and the holy and benevolent God to the reverence of His intelligent creature. Benevolence or good-will is the delight and the desire to see and to make others happy. This is exhibited in that paternal benignity which has bestowed on the intelligent creation all that is needful for comfort and happiness. This is the only form of love which is properly gratuitous, or irrespective of the character or conduct of the object of regard. This alone, therefore, can be strictly called good. In this threefold division of the potences of affection, it seems that the love of gratitude has most to do with the hand, that of esteem with the head, and that of good-will with the heart. It takes all the might of mind to apprehend, appreciate, and rightly love the Author of all being and all perfection.

III. The temperate is the right and the good applied to myself. Its sphere is the allowable. Within the wide range of the allowable the law of right and good comes in to mediate between the duties and interests of a man's own nature. Here the moral reason condemns

the wrong use of any of our powers, as especially of the imagination. It likewise forbids any wrong done to one part of our nature by another. It sits as arbiter between the appetites and the higher interests of our nature. The appetites are prone to self-indulgence, and would lead to excess and wrong if not duly controlled. Health and happiness have rights on the one hand, against the excessive or incontinent indulgence of the appetites, and on the other hand against total abstinence from the legitimate enjoyment of any of the pleasures of which we are susceptible. And the right and the good have claims that cannot be set aside against any encroachment of one part of our nature on the interests of another, and consequently against excess on the one side, and total abstinence from that which is designed for our use on the other. Hence our personal conduct has two clearly distinguishable spheres—total abstinence from the wrong, and temperance in the allowable. The former is a straight line, from which there is to be no deviation; the latter is a wide field, in which we are free to wander, bounded nevertheless on all sides by total abstinence from wrong and from that excess which cannot be indulged without disturbing the balance of equity between the various parts of our whole nature. The only factor entering into the question of right or wrong is conscience. Into the question of the allowable enters the second factor, health or happiness. Neither total abstinence nor unlimited indulgence is admissible here. Reason and conscience intervene to determine what is due to each part of our nature, and when they conflict, which is to prevail. The appetites have a claim which cannot be contravened. But health has a higher

claim, and therefore imposes a limit. Happiness has a still higher claim, and may control not only appetite but health. Holiness has the paramount claim, and enforces upon the indulgence of appetite the law of equity and good-will. This is temperance in its highest and truest form.³⁹

III.—CASUISTRY.

We are now prepared to consider the several cases which come under the general principles of morality.

1. If only one thing were in existence, and that destitute of reason, there could be no moral relation or conduct, simply because there would be no moral faculty.

2. If two such things had come into existence, it is equally manifest that no moral relation could emerge on either side. They might remain totally unaffected by each other, or there might be material, chemical, or vital action between them. But no principle of moral law could make its appearance.

3. Let there be, on the other hand, a single person called into existence, and moral relations will immediately supervene. For a person possesses a variety of intellectual, volential, and active faculties and capacities, and these involve a number of internal relations. Whenever the will is concerned, these relations are moral. They involve the allowable, the right, the good. The allowable is the sphere in which the propensities may be indulged. The right, or the equitable, guards the claims of every other propensity or quality against the encroachment of each one. It therefore draws the boundary line of the allowable. The good is the range of benevolence, which serves as a farther check on the

indulgence of the selfish propensity. Temperance, or self-control, according to these principles, is the cardinal virtue of the inner man. Here the authority of the moral law is paramount. The duty of self-preservation, or regard to health of mind and body, appears a special regulating principle. As the rational creature cannot stand absolutely alone, and the Creator is the only being that ever was alone, we must defer the farther consideration of this topic to a subsequent stage of our discussion.

4. If a person and a thing stand on the field of existence, each apart from the other, it is manifest that the former has no right to seize or use the latter of his own accord for his own purpose. He may not touch it in the way of applying it to his own use. In the case of the two having come into existence without any influence of the one on the other, it is impossible to assign any reason why the one should lay a finger on the other. I may have a want, and I may have an instinctive feeling that the thing before me might supply it; but that does not determine the right. It may be fit for me, but it is not therefore mine. I may not attempt to grasp it by force or compass it by fraud. And thus in the first moment of my conscious being and perceiving an external thing there may spring up in my mind the simple and unquestionable law of righteousness. I decide that it is right for me to keep back from that which does not belong to me, and wrong to take the same. My conscience has now taught me what is right and what is wrong. I have discovered a principle of paramount importance and of immense compass. It is the foundation of all individual, social, sacred equity. It regulates all fair dealing between man

and man, as well as between man and God. It may be expressed as a command in the outward formula, "Thou shalt not take," or in the inward principle, "Thou shalt not covet what belongs not to thee."

5. Let us now suppose the existence of two persons, each independent of the other. This, like the problem of the two bodies in astronomy, will reduce the question of relative responsibility to its simplest form. Here it is obvious, that each of the two has rights and duties in reference to the other. Antecedent to any interference, it is right for each to refrain from that which belongs to the other, and to yield that which is due to the other. Hence it is right for each to respect the person, the liberty, and the rights of the other. And it is wrong for the one to violate the person, restrict the freedom, or infringe the right of the other. As long as these principles are observed, the moral relations of the intelligent universe are undisturbed. This is the cardinal virtue of justice or equity between man and man.

On the first interference of the one with the rights of the other, a new state of affairs comes before us. Wrong is the contrary of right, the breach of the law of equity. It behoves us now to trace the consequence of wrong, when it becomes an actual fact. The one person has taken by force or fraud that which belongs to the other. The person wronged has no doubt a right to his own, which is inalienable; but he has not in himself a right to violate the person of the other in order to wrest his own from his hands. For he had no right over the wrong-doer before he did the wrong, and he has not gained any right over him in consequence of his becoming a wrong-doer. He is no more at liberty to use force

or fraud than the other was in the first instance. He may expostulate with him or demand redress, but with the wrong-doer personally he can go no farther. Here it must be admitted that things are out of joint, and we are at a dead lock in morals, if we be limited to the two individuals in their equality and relative independence.

We may put another case of wrong somewhat different from this. The one may attempt to do some violence to the other. Here it is plain that the latter is bound by the law of self-preservation to defend himself by repelling the attempt. He may be able to do this, in which case the attempt at violence fails ; but still a wrong has been done in the very attempt, which remains to be redressed. The party wronged, however, is not at liberty to proceed any farther than self-defence for the reason already assigned. On the other hand, he may not be able to defend himself, and so the deed of violence may be perpetrated with no power, even if there were any right to enforce redress. Here we are arrived at the same difficulty in the righting of wrong as before.

5. A higher Power must now intervene. This is precisely parallel to the case of things that stand in a physical relation to each other. They are found to act and re-act mutually. The very fact of such interaction implies a higher Being, on whom their subsistence and physical correlation depend. Without such connexion through a common Author it is impossible to advance any reason for their mutual influence. So here a moral wrong cannot be redressed without a Supreme Governor. He that has an underived existence is without an owner : He is, so to speak, His own owner. He is at the same

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time His own governor. For He is a Spirit, having wisdom, goodness, and power in all their transcendent perfection. He must therefore govern Himself with absolute rectitude. For the same reason He is the absolute Proprietor and Governor of the heavens and the earth which He has created, and of all that in them is. With regard to Him, four cases come into consideration: the Creator alone; the Creator with a single intelligent creature; the Creator with a person and a thing that have been created; the Creator with two intelligent creatures.

First, the Creator alone. Being infinite in intelligence, benevolence, and power, He is absolutely perfect. He must of consequence have in Himself an inexhaustible affluence of resources for holiness and happiness. As His being with all its power is underived, He has no master. He is in fact His own master. He has all His powers and capacities at perfect command. He is alone. He has no equal, no co-eternal, and therefore no possible rival who might have possessions independent of Him. He is the Creator of all actual things, which are therefore already His own by an absolute and indefeasible right. He has therefore no temptation to take that which does not belong to Him. Besides, He is eternally and essentially all-sufficient, and has therefore no external want. Moreover, He is infallible in reason, which is inclusive of conscience. He has therefore an immediate and intuitive knowledge of right and wrong, of good and evil; and, by His very essence, necessarily approves of the right and the good, and disapproves of the wrong and the bad. He has also absolute and irresistible ability to walk in the path of unalterable

integrity. Temperance or self-government has its full scope in Him.

A new principle is here developed, that of authority and its correlative obedience. Authority depends on ownership. I have a right to do what I will with my own. If the ownership be relative, so is the authority. If, on the other hand, it be absolute, the authority will also be absolute. Absolute ownership rests on one of two things, on being uncreated or on being Creator. He that is uncreated is thereby absolute owner of Himself and all that He is. The Creator is absolute owner of all that He has created. Hence He is absolute governor of Himself and of all His creatures. This sublime autocracy or self-regulation holds a perpetual place in the breast of the Most High. It has its living semblance in the bosom of every unfallen spirit. And it has its hopeful germ in every heart where a new-born allegiance to reason and to God has recovered its benignant sway. This temperance is absolute in the Creator, and relative in the intelligent creature, who is his own master only in subordination to the paramount rights of his Maker.

6. We now come to the second case. The Uncreated proceeds to the act of creation. He calls into existence an intelligent being, and we ask, what are the moral relations that emerge? The motive to create we are not competent fully to assign; but the allowableness of the act we cannot hesitate to affirm. He had unlimited power, combined with infallible wisdom and unchangeable goodness. We may reverently presume that there would be an ineffable delight in the free exercise of His omnipotence. This would be at all events a worthy motive.

The first obligation we recognise, then, in the Creator is, that His work be good, and, in the present case, morally good. The goodness of a creature consists in being exactly fitted for its purpose in the system of things. A creature morally good must withal be endowed with all the qualities requisite for holiness in the place it occupies in the universe of things.

The second obligation on the Creator is that the happiness of His holy creature be secured. To be happy the rational being must have every excellence which is requisite to the perfection of his nature. He must therefore be free. By his very rationality, indeed, he will be at liberty to choose. But he must also have liberty to act or not to act according to his abilities and opportunities. It is manifest that freedom is equally necessary to holiness ; for without freedom there can be no responsibility, and therefore no holiness.

Liberty to do or not to do obviously implies the possibility of wrong-doing, and consequently of a fall from moral integrity. Hence the possibility of a fall is incurred by the creation of a responsible being. The safeguards against such a contingency, however, are sufficient to justify the act of creation. These are the integrity of the Creator and the rationality of the creature. Not a shadow of injustice or unkindness will be found in the Creator towards the creature. On the contrary, equity and benevolence will be manifested in all His proceedings. Hence they will be fitted to command the reverence and gratitude of the creature. At the same time the reason, and therefore the conscience, of the responsible creature will prompt to the duties of goodwill to the person and obedience to the authority of

the Creator. These are the reasonable guarantees for the maintenance of moral order. The case of the occurrence of wrong will come up hereafter.

Hence we perceive that as soon as a responsible being stands face to face with his Creator, a moral connexion of necessity emerges, of which the conditions are the principles of right and love, and the peculiar obligations arising from the relation in which they stand. Among the latter are included authority on the one hand and obedience on the other. By virtue of creation the Creator has a right to command, while the creature is bound to obey. He does not need to enjoin the moral law, which is binding in itself. He is restricted by His holy nature from enjoining anything that is not equitable or allowable. His authority therefore ranges within the allowable and the possible, and here His command has a binding force on the creature. I am bound to do the will of the Holy One, who made me and gave me all my powers. I myself and all my powers belong to Him by an absolute right. It is right for me therefore to yield to Him that which belongs to Him, and all that comes of it. Now, to will and to do come of these powers I have from Him. Hence it appears that obedience is a necessary consequence of the general principle of right. The authority of the Creator is absolute: that of the parent, the pastor, the teacher, the master, the magistrate, is relative. And so of the obedience I owe to each.

7. We come now to the creation of a person and a thing. The person is capable of happiness, and therefore has certain appetites which crave to be gratified. The thing is fitted by its nature to gratify some of them ;

but it is independent of the person, and hence it is not right for him to appropriate it. Now it would be cruel to create a being with certain susceptibilities without providing the means of gratifying them: it would be absurd to create a thing fitted to satisfy appetite if there were no appetite to be satisfied: and it would be malignant to create both, and yet not permit enjoyment. Hence it follows that the benignant Being, who has created a person susceptible of enjoyment and a thing fit to be enjoyed, has designed the one for the other, and will make the grant of the one to the other. Such grant would be superfluous in the case of an irrational animal; but it becomes necessary whenever a rational being is concerned. Hence it appears that the intervention of the Creator, Possessor, and Governor of the universe is necessary to adjust the moral relations between His rational and irrational creatures.

It follows that so far the holiness of the creature, while it brings with it its own unspeakable inward blessedness, is no bar in the way of his external happiness. A contingent hindrance may present itself; but the rectitude of the Almighty is pledged to secure his real and perpetual happiness.

8. Lastly, let us suppose two persons to be called into existence. As soon as two moral beings appear on the stage of existence, a mutual understanding or natural compact must arise between them, determined by the relation in which they stand to each other. The conditions of this unwritten but self-evident and self-binding covenant are the laws of right and love. And as long as these laws are respected on both sides, the moral relations adjust themselves in harmony with the

eternal principles of righteousness and benevolence. The rights of the Creator will also naturally fall into the form of an aboriginal concordate, and must be acknowledged by both ; and thus they may have rendered to all their dues, which is the fulfilment of the law of right. But since the possibility of wrong is the consequence of responsibility, we are under the necessity of meeting this contingency.

9. We have already seen that he who has suffered wrong has not thereby acquired a right to violate the person of the wrong-doer. But there is a higher Power, on whom both are dependent for their existence : and hence the moral disorder is capable of being rectified. Recourse must be had to the Creator of both, if the law is to be vindicated. Hence we arrive at another great obligation of the Creator—namely, to be the moral Governor of the intelligent universe ; to maintain the cause of the righteous and the good ; to redress their wrongs, and requite the wrong-doer. As their common Creator, He is the absolute Proprietor, and therefore Governor, of His creatures. He is entitled as well as bound to interfere to the utmost extent that justice requires.

In the first place, justice does not demand that the supreme Governor should by the strong arm prevent the occurrence of any wrong deed. For, on the one hand, he could not thereby prevent the attempt or the intent to do wrong. This would be to put a stop to liberty to choose, which could only be done by abolishing a true will altogether, and so annihilating reason. And, therefore, on the other hand, to lay an arrest on free agency or liberty to act in every instance of wrong intent would

be to prevent the overt act without preventing the in-currence of guilt, to impose a physical inability to do wrong, while the moral ability to incur guilt was not and could not be disturbed. Such a proceeding appears to be at variance with equity and wisdom.

It is inconsistent with equity. For it is to treat a moral as a physical being, to apply a physical law to a moral nature. It is equally contrary to wisdom. For,

1. The mere prevention of the overt act, and consequently of the personal damage it might do, by an invariable law is, if it be a trifling advantage, counter-balanced by many serious disadvantages. It is neither productive of virtue nor preventive of vice.
2. If it is not known that a wrong intent can never be carried into effect, it cannot affect the disposition. If it come to be known, a check may perhaps be put upon the volition of wrong. But the absence of wrong intent might be of no moral worth; because it might proceed, not from deference to a sense of propriety, but merely from experience of the inability to accomplish ill intent.
3. The existence of evil in any one breast would be unknown to all except the Searcher of hearts. If the punishment of it, therefore, were known, it would be a mystery or a snare to all beholders: a mystery if they were not themselves conscious of ill intent, and a snare if they could not understand the procedure of the Almighty in the punishment of those who did not seem to be guilty. And if the punishment were a secret to the innocent, the justice of heaven would be clear to the guilty, but still obscure to the righteous.
4. The existence of virtue itself would be thrown into discredit, as there would be no tangible difference between the righteous

and the wicked, or, if the punishment made an outward distinction, the difference would only add to the perplexity of things. 5. The cultivation of the moral faculty would be lame and defective, because the innocent would not be aware of the working of evil, nor of the grounds of retributive justice. 6. If the tendency to unrighteousness of thought were checked, the temptation to ungodliness would be increased, as the equity of the ways of God with man would not be obvious. It seems impossible to defend the application of physical force by an invariable law to the act that would otherwise follow a volition.

In the next place, it is not necessary for the Creator to publish the moral law, because its fundamental principles are self-evident to the unbiassed or well-balanced mind as it comes from the Maker's hand. He must indeed expressly proclaim any positive edict or command which He may prescribe to His intelligent creature; because, from the nature of the thing, such precept is not self-evident, and cannot be otherwise known to the subject. The first positive precept which the Maker needs to enjoin arises from the grant which He makes to the creature of such things as are needful for his subsistence and comfort. This grant cannot be unlimited. To make it absolutely universal would be to invest the creature with all the wealth of the Creator, and seat him on the throne of heaven. This would be a reckless bestowment of boundless treasure, that would be of no use whatever to the creature; an indiscriminate handing over of things positively injurious to him as well as beneficial; and above all, a turning upside down of the essential relation of the Creator and the creature.

This would be neither right nor reasonable. Hence there must be a limit to the grant, however liberal it may be; and the obvious limit is that which is needful to the welfare of the creature. All that is beyond this may be withheld; and all that is injurious or unsuitable it is even right to withhold. The edict which prescribes the limit is a positive precept. So far all is definite and intelligible. Man is at liberty to enjoy the bounteous grant of his Maker without any restriction but that which the law of temperance imposes. And he feels himself bound by the general law of equity, and doubly bound by the law of gratitude, to abstain from all that lies beyond the grant made to him, inasmuch as it belongs not to him but to another, and that other his Maker and generous Benefactor.

But there is something beyond all this absolutely necessary to adjust the moral relation, and beget a good understanding between the Creator and His intelligent creature. The latter may not need to have the moral law outwardly revealed to him, because it is written in his heart. But he looks up with a wistful eye to his Maker, expecting an answer to the momentous question, Will it be well with the righteous? This question is quite distinct from the obligation of the moral law. The responsible being feels that he is bound by the law of equity, irrespective of consequences. But at the same time he is free to look up to heaven, and inquire what the consequences will be. He may be able by the inherent light of reason to conclude that the great eternal Spirit of absolute reason will maintain the cause of the righteous, and guarantee happiness as the uniform attendant upon holiness. But it may be reasonably

expected that the Holy One will proclaim, not only that it is right that it should be well with the righteous, but that this is the law and custom of His moral government. This expectation will not be disappointed.

There is, however, another question which it is equally necessary, though not so agreeable, to contemplate. The possibility of wrong in a world of responsible creatures has been already acknowledged, and the counsels of eternal wisdom must have provided for this contingency. And benevolence, if not equity, demands that the principle of celestial jurisprudence, which comes into operation on the event of wrong-doing, should be proclaimed before the moral creature sets out on the path of responsibility. This raises the question, How is it to be with the wicked ?

It is not necessary that the Supreme Governor should instantly deal out justice to the person wronged, or lay a judicial hand on the wrong-doer. He may, for wise, holy, and even benevolent purposes, forbear for a time to redress the wrong, to recompense the oppressed, and execute judgment on the oppressor. But it is all the more necessary to declare from the very beginning, antecedent to all moral acting, what shall be the consequence in the end of wrong-doing, both to the innocent sufferer and to the wrong-doer.

The case of the righteous sufferer is comparatively plain. Shall not the Judge of all the earth do right ? He will, without doubt: He must, by the very perfection of His holiness, right the wronged. He will render to him full compensation for all the wrongs he may have suffered. He is bound by His position, as the absolute Proprietor and authoritative Governor of the universe,

to defend the right and maintain the cause of the injured. For He has given him his being; He has fitted him to be capable of holiness and susceptible of happiness; and He is bound by equity and goodness to afford the means of happiness to him who maintains his integrity, and, if he is wronged, in due time to cause the wrong to be redressed. What the redress may be will depend on the circumstances. In the nature of the case it can scarcely be a literal restoration of that which was taken away: it cannot be, for example, the repayment of ten pounds to him who has been unjustly deprived of that sum; for that is a thing of merely temporal value, and at the great day of account may go for nothing. It has no intrinsic value, and, besides, the relative value of it may be vastly greater to one man than to another, according as it is his all or the thousandth part of it. But redress is at all events an equivalent for the real loss. It is a refilling of the cup of happiness that has been shaken by the hand of violence; and it must have an additional sweetness that makes up for the period of privation or the degree of suffering. It is measured out by a just and generous hand, verifies the confidence of long-suffering patience, and fills the heart of him whose wrongs are all redressed with unspeakable joy and gratitude.

The case of the wrong-doer is more complicated. When full compensation is made, not only for the material damage, but also for the loss of time, of use, of peace of mind, and of personal violence, the party wronged is righted. But is this the real measure of the wrong or the proper penalty of his crime? To ascertain the real measure of the wrong-doing, we must know all

the circumstances of the case. A man at the point of starvation or having a starving family may have pulled a few apples from a tree, plucked a few stalks of corn from a field, or taken a loaf from a store, with the sole design of keeping soul and body together. A man under no pressing necessity may have done the same from a selfish or covetous spirit. The guilt is vastly greater in the latter case than in the former. A man may wound or maim another in self-defence. Another may do the same in the heat of passion, in the spirit of revenge, or under the influence of pure malignity. In the one case there may be no guilt at all; in the others the degrees of guilt are various. A man does wrong without his knowledge or with his knowledge, or in defiance of man or of God. It is manifest that here also there are gradations of guilt, from the lowest to the highest. It is plain also that one man cannot estimate the guilt of another, because he cannot discern the motive; and a man can only partially estimate his own guilt, because he is more or less a self-deceiver; and hence the Omniscient only, who searches the heart, can truly measure the degree of guilt. Still we may arrive at some important and self-evident conclusions concerning guilt.

Let us return to the simple case of theft. When the wrong-doer has been compelled to restore his neighbour's property with interest for its use, he is in no worse case than he was before the wrong was committed. He has therefore really suffered no punishment for his fault. The borrower who receives a sum of money from the lender, who consents to give the loan at a certain usance, is bound to restore it with the stipulated interest. The wrong-doer who is merely compelled to do the same is

in no worse case than the borrower. But the borrower has been guilty of no fault, while the wrong-doer has been guilty of fraud or violence in taking away that which belonged to another and of the intention of not restoring it. Here are two elements of wrong, which involve guilt and deserve punishment, when the material compensation has been fully made. The wrong-sufferer and the wrong-doer are estranged from one another. There is a disturbance of the moral relation between them. The wrong-doer is no longer a just or kind neighbour, but an enemy, who has done wrong or evil to another. The wrong-sufferer, however he may feel towards the wrong-doer, cannot but condemn the deed of violence or fraud and the intent to make no restitution. Moreover, the sufferer may be under some apprehension, especially if the sentence be deferred, of a similar act of violence or deceit with a similar intent, and therefore must live with some anxiety in the neighbourhood of the offender. And it is manifest that at the end of some time he must in equity be released from this apprehension by being placed beyond the reach of the evil-doer. It must be very plain from all this that the guilt is by no means expiated by enforced restitution of that which had been unjustly appropriated. The penalty may include this, but it must obviously go beyond it.

Let us now suppose the being wronged to be not a fellow-creature, but the Creator. Here it is evident the thing taken, though it ought to be restored as before, is a matter of comparative insignificance. It makes a very small item in the demerit of the act. Let it be understood that this is the first offence. The Maker has said,

Of all that is mine, thou mayest use *this* ; from *that* thou art to refrain. In pure kindness as well as justice, He has announced the penalty of disobedience. In these circumstances let us try to form some estimate of the guilt of the first transgression. The Creator is perfect in holiness, and therefore in equity and kindness to the intelligent creature, whom He has called into existence. He holds fellowship with him as a father with a child. It is clear as the light of day that the intelligent recipient of these benefits owes to the all-holy Giver justice, gratitude, esteem, and goodwill, as well as obedience. Notwithstanding all this, he has seized upon that which belongs to his Maker, and appropriated it to himself in defiance of the prohibition and the penal consequence. The value of the thing is obviously a matter of the least possible import, and sinks into oblivion in estimating the momentous significance of this act. The transgressor has passed in an instant from the state of equity, gratitude, esteem, and goodwill toward his benevolent Maker. He has plunged into violence and fraud with intent to hold what is not his own. He has disobeyed the command and despised the warning of his rightful and absolute Lord. He has thus passed into the state of injustice, ingratitude, irreverence, and ill-will towards Him who has been to him all that a Creator and a Father could be. In the light of these considerations, the smaller the value of that which is taken the more inexcusable the act of taking it. If in justice and good-will all the means of happiness were freely bestowed on a creature in a state of innocence, must they not in all equity be withdrawn from one that has become unjust, unthankful, disre-

spectful, malign, defiant, and disobedient? Now, the boon of a holy nature, with all facilities for its development, and all means of realising and perpetuating happiness, including the fellowship and favour of the Creator, is life in its pregnant and transcendent sense. The fall of the spirit by its own act into a state of wrongdoing and enmity against God, with the consequent forfeiture of the joys of the present and the hopes of the future, is a part at least of what is called death. Is it the whole? The privation of pleasure cannot be strictly called a penalty, because the bestowal of it was the result, not of equity, but of kindness. Equity only demands what is necessary for subsistence; kindness adds that which constitutes happiness. He that receives that which is needful for existence is not punished; and this is the condition of him who is deprived of the agreeable but not of the necessary. Moreover, if punishment had consisted merely in the privation of blessings freely bestowed, it would have been the same for all faults, which is contrary to the principle of equity, requiring that the punishment should be proportioned to the offence. The positive infliction of pain leaves room for this equitable apportionment. Moreover, the awarding of pain for demerit brings the law of punishment under that of reward or retribution. The general principle of requital is thus applicable to good or bad conduct through all its degrees. Men are accordingly to be treated by one law of equity, according to the deeds they have done, whether they be good or evil. Hence we are to understand that death, as the penal consequence of sin, includes not only privation of pleasure, but also infliction of pain proportioned to the demerit of the

offender. This can only be determined by the Searcher of hearts and the infallible Observer and Weigher of all the circumstances of each case. And the sentence is only to be executed in full when the Supreme Judge Himself sees fit.

The only mitigating circumstance of a first offence is temptation. This implies a previous offender so inveterate in depravity as to tempt another to evil. That it is only a mitigating circumstance is manifest from this, that the tempter can only be a fallen creature, from whose false and wicked insinuations a being hitherto innocent ought to shrink with abhorrence. As the first offender must have gone astray without an external tempter, the subject of temptation can only have similar delusive inducements to sin, presented to his mind perhaps in a more exaggerated or imposing form. If evil inducements have of themselves prevailed, much more may they prevail when urged by a wily tempter. We do not venture, however, to estimate the degree of difference temptation makes in the guilt of a transgressor.

We have now arrived at the great principle of retributive justice. It is called vengeance, because it vindicates the law. It is denominated the *lex talionis*, or law of retaliation, because it requires like for like, eye for eye, tooth for tooth. It is the self-evident maxim of even-handed justice, which involuntarily starts up in the burst of indignation with which we witness the perpetration of wrong. The compensation which it demands of the wrong-doer is called the pain, penalty, or sanction of the law. The term vengeance or vindictive justice has come into disrepute, because personal

feeling has often tempted the injured party, though a creature, to take the law into his own hands, or the human administrator of it to exceed the penalty due to the crime. But retributive justice is a clear and undeniable axiom of moral truth when it is in the right hands. And we have seen that the Creator is the only ultimate judge and absolutely authoritative administrator of the moral law. He has the indefeasible right by creation, not only to demand, but to enforce the claims of the oppressed and the pains incurred by the oppressor. As the final arbiter and vindicator of universal law, He alone has the right to proclaim, "Vengeance is mine ; I will repay."

We are now prepared to understand what the most high Founder of heaven and earth is bound in kindness to announce to the intelligent and responsible being, when He imposes on him the first positive command, which is requisite before he sets out on the path of free agency. He is to warn him in express terms that the consequence of transgression is death. Here let us once more call to mind that all sin is in its essence unreasonable, and in particular that iniquity (un-equity), ingratitude, irreverence, malice, and disobedience to the just and good Creator are in their very nature contrary to the self-evident principles of moral reason ; and we cannot but feel and acknowledge that the first act of violence, in which a hitherto holy creature departs from equity, gratitude, reverence, good-will, and obedience to the pure and gracious will of his Maker, merits condemnation and condign punishment. It is obviously the part of a real friend to warn the newly-created being of the fatal consequences of an act which he cannot but

condemn with abhorrence. Hence the first covenant with man demands in kindness, if not in equity, the express declaration of the penal death which awaits transgression. The rational man is thus awakened to a solemn sense of the responsibility of his actions. He is aware that his Maker is just and gracious, and is solemnly pledged to maintain the cause of the just and good, and execute judgment on the wrong-doer.

We cannot suppose the first instance of wrong-doing to be gratuitous or purely malicious. To hate, slander, injure, or destroy without a cause, seems to be impossible for a being hitherto absolutely innocent. We cannot conceive a rational being, as yet unblemished, to act without a motive in contradiction to his previous disposition. This would be to imagine a creature of a certain nature to act contrary to its nature without any cause ; which is manifestly impossible. Hence the first instance of wrong-doing must have been occasioned by a strong desire for some object.

The first act of disobedience to the moral law may not display in its very front the explicit intention to injure man or defy God, to depart from equity, gratitude, esteem, good-will, and obedience into the contrary of all these. Yet there can be no doubt that all this is implicitly or virtually intended, and will eventually come out into conscious intention in a course of persistent depravity.

The moral being in the first transgression may have been so engrossed with the desire of the object as to have forgotten or looked away from the wrong or the evil it involved. He may have led himself or allowed himself to be led into the delusion that he would gain

more than he would lose, or that he might escape the penal consequence, or that he was unjustly treated by the supreme Governor. And if his thoughts were far away from the immediate and direct wrong, it is manifest that they would be still farther from the ultimate wrong which we have seen to be implied in the act. The requisite attention would have convinced him of the direct wrongfulness of the act, and a due measure of reflection would have brought up before his view the remoter forms of wickedness and impiety which it involved. Such attention and reflection ought to have been given to a contemplated act, which bore on the very face of it defiance of the self-evident principle of equity. If they were not given, the very neglect involves a guilt proportioned to the gravity of the occasion. In any case, therefore, the transgressor cannot be freed from the remote any more than from the immediate and obvious guilt of his deliberate crime.

It is manifest that the first offence of a being heretofore holy involves a tremendous change in his moral nature. Before, he was pure in heart : after, he has proved the evil of his heart by his outward offence. Then he was only theoretically cognisant of the nature of evil : now he is experimentally acquainted with it in himself. Then his heart acquitted him of all blame : now it condemns him as a violator of the law of conscience. Then his attention was not given to the real import of the contemplated deed : now all its guilt stares him in the face. Then he was at one with God and man : now he is morally estranged from his Maker and his brother. Then his confidence was high and his hope serene : now doubt shades the present, and the dread of punishment

darkens all the future. Then he was strong in yet unbroken integrity: now he is weak in actual guilt, in self-condemnation, in shame, in opposition to God, in fear of retribution. Who can duly estimate the depth of this demoralization?

The first sin involves in reality all the rest. It is the first bud of a growth, which, if unchecked, will end in malignity toward God and man. For the only alternative with him who has once departed from the path of equity and charity is to repent or not. And the question is which of these will he do? In the absence of any new revelation or interference on the part of his Maker, will he repent? It is evident that repentance is to us a conceivable and physically possible event. It is plain also that the period immediately after the first offence is as favourable or more favourable than any other for its occurrence. The consciousness of having done wrong, the sense of the guilt or demerit of sin, the shame in the presence of the pure, the fear of the Judge, are then stronger or at least as strong as ever after. But there are many considerations of great weight that point the other way.

In the first place, if he were to repent, what then? The guilt has been incurred, and the penalty must be exacted. Meanwhile there can be no fellowship with the holy. On the contrary, the culprit is estranged from the innocent, especially from the person wronged. Far from God, and having no hope: this is his dark portrait. Even if the positive part of the punishment were limited in point of duration, what would ensue after the term is ended? Can the penitent promise himself a reinstatement in all the good understanding,

intimacy, confidence, esteem, favour, honour, and dignity which he enjoyed before his fall? In the absence of any voice from heaven, he can only feel that an indelible stigma has been stamped upon his character. There can be no return to that position of acceptance with God and man from which he has fallen. And if this banishment from the standing of peace with God cannot in the ordinary nature of things be removed, are we to suppose that the positive part of the penalty of an act that cannot be undone can be terminable? Is it not reasonable to conclude that, whatever be its amount, it must have the same perpetuity as the negative penalty involved in separation from the home of God? If this be the natural prospect before the transgressor, it holds out no encouragement to repentance.

In the next place, however, he will not of himself repent. His conscience may instantly condemn the act as wrong, and he may have a dread foreboding of the ultimate penalty that awaits him. But this is not repentance. He may even wish the deed undone, in view of the fatal consequences, which he now realises as he never did before. But even this is far short of true repentance. To repent is to return to that holiness of disposition which belonged to the criminal before his fall. To do this would be to have greater strength of moral principle after transgression than before. For in a state of integrity his strength gave way before a temptation to depart from holiness of disposition. Then he needed only such a determination towards duty as might suffice to withstand the temptation. But after the transgression he needs a determination which will enable him first to return to the path of duty, and then to

keep in it under the pressure of a like inducement. But it must be allowed that the moral determination to that which is right and good will be immensely weakened by a step so momentous as a first departure from duty. Hence we are driven to the conclusion that, in the absence of any external or extraordinary influence, the reverse step of repentance, in any valid sense of the word, will not be taken after the first overt act of transgression.

If there be no self-originated repentance, there will be no end to the estrangement from God, nor to the measure of punishment which has been incurred. Hence the natural prospect of the transgressor is only the blackness of darkness for ever. God is holy; I have become unholy: hence I am doomed to die. That is the sum of his philosophy, apart from the voice of Divine revelation. It holds out only the dark flag of despair.

The whole of this discussion has served to bring out in strong relief before the view in what part of the mind moral degeneracy has its origin and seat. Not in the power, which is not moral in itself, and is, moreover, the mere serf of the will; nor in the understanding, which we cannot conceive to be perverted in its intuitive principles without being destroyed; but in the will, which has yielded to the voice of appetite against the behest of conscience. In this alone has depravity its origin and its seat. By the first act of disobedience to the dictates of the moral reason the will itself receives a bias from which of itself it cannot escape. Its moral freedom is gone, never to return. And though this moral delinquency does not subvert the reason or directly affect it, yet it indirectly affects it by misguiding the imagination, as it did in the first transgression in all

cases where self-will is paramount. And hence the wish is often father to the thought. On the other hand, where self-will is out of the question, notwithstanding the discomposing shock that has been given to the harmony of the soul by transgression, the reason maintains its balance, and is still able to form a correct judgment, not only on physical, but also on moral questions. Hence the progress made by men unacquainted with a Divine revelation, in mathematical, metaphysical, and even ethical science. In that most interesting period of Grecian history in which Socrates lived, the ideas and principles of ethical truth began to dawn upon the reflecting mind. The dæmon of Socrates, that from his boyhood often restrained but never impelled him, was evidently his conscience that loomed upon his consciousness in its nascent form. Plato's ideas and his cardinal virtues—wisdom, courage, temperance, and justice—were the opening germs of metaphysics and ethics in the Grecian mind, and prepared its language for the expression of Christian ideas.

This is no mere idle speculation in which we have been engaged. It is an undeniable fact that all men have sinned. And the expounder of the human mind, as it is, is bound to acknowledge and signalise this humiliating condition of our moral nature; else he should be guilty of ignoring a capital fact in the history of the mind. The ancient heathen were not ignorant of the moral impotence of man. Socrates, who may be regarded as the Solomon of Greece, makes this remarkable statement—"The result (of comparing himself with a leading politician) which I acquired was, that I was a wiser man than he, for neither he nor I knew anything

of what was truly good and honourable ; but the difference between us was, that he fancied he knew them, while I was fully conscious of my own ignorance : I was thus wiser than he, inasmuch as I was exempt from that error." From this and the like passages it is plain that Socrates was aware of a defect in the moral nature of man. He regards it, indeed, as a defect in knowledge ; but it is in the knowledge of moral distinctions, that is, in conscience. Plato, as well as his contemporaries and followers, was quite aware of the evil that was in the world of man, and he occupied himself in the Republic with suggesting a remedy. But those earlier thinkers were compelled to acknowledge that no man had yet discovered the cause or the cure of the malady. It was vain to look for the cause in matter, and to aim at its removal by mortifying the body. Matter has no moral quality, and therefore cannot be the seat of moral good or evil ; and abstinence from outward things, however grand and heroic as an effort, failed to touch the central evil, the corrupt state of the heart. Plato confesses that a perfect republic is not to be found on earth, and points to heaven as the only place where it can be realised. (Rep. IX.) This is a frank acknowledgment of the degeneracy of man. But we need not go to ancient Greece for the evidence of this fact. It lies patent to the observation of all thinking men. As the axioms of geometry are obvious to the reflecting mind, so the first principles of morals are acknowledged by the common mind as soon as they are put into intelligible language. When these simple principles are once called into recognition, the child of man soon begins to pronounce his own condemnation.

There are, as we have seen, incontrovertible reasons to prove that the Eternal Spirit is immutably perfect in holiness. It follows that the rational creatures whom He called into existence were all originally in every respect good. As in the present state of the human race there is no man morally perfect, it is evident, apart altogether from revelation, that there must have been a falling away from God at a very early date in human history. The first lapse into moral evil must have shaken the nature of man to its very centre. We know that mental peculiarities perpetuate themselves in the offspring, much more must this most vital of all changes leave its indelible trace upon the remotest posterity. The state of the world accords with these conclusions. The history of the human race, with the exception of that mild and bright episode which revelation has introduced into it, is a record of selfishness, of violence, of war, of conquest, of might claiming to be right, of the enslavement of the weaker sex and the weaker race. This constrains us to blush for our depravity. The understanding cannot but take note of its palpable existence. Reason can trace the principles of its rise and progress, and determine the nature and extent of its penal consequences. But it can go no farther. It cannot suggest, much less demonstrate, any mode of escape from the wrath to come. If there be any such, it can only be revealed by a voice from heaven. With what earnestness, then, must the self-condemning soul turn from the last dark finding of philosophy to the volume that claims to be the Book of God, and certainly contains the only gospel of a new hope for man!

Meanwhile the relation of mental philosophy to re-

vealed theology now becomes evident. It is simply that of antecedent and consequent. The former reveals the dire want and dark prospect of fallen humanity. The latter presents the history of the fall, provides a wealth of grace and peace for the self-condemning, and awakens once more a living hope in the forlorn breast of the penitent.

Next to the authority of God is that of the parent. This is founded in nature. For the parent, under God, is author of his children's existence. He has, therefore, a natural right to impose commands on them and to exact obedience, always in subordination to the allegiance he himself owes to the Parent of all. The parent, taken in a wide sense, becomes the patriarch or head of a clan, sprung from their common ancestor. When mankind have outgrown the patriarchal age, the hereditary or elective monarch assumes his place; and at length the state or established constitution makes its appearance, in which the governing and governed departments, and their correlative duties and prerogatives, are determined by a code of laws, unwritten or written, to be modified from time to time as occasion may require. In all these cases the fundamental principles of moral rectitude are unchangeable; but the application of them is to be varied according to the circumstances and characteristics of the community.

The parental and magisterial authority affords occasion for the application, on a limited scale, of all the great principles of moral government which have been already unfolded, and even of some which have not been discovered in the general principles of natural law. Pardon, correction, and reformation of morals are familiar

to our minds in the conduct of the family and the state ; and we might be prompted thence to imagine that reason is warranted to conclude antecedently that mercy will of course be exercised towards the transgressor on the part of God. But we must be careful to distinguish between the convictions at which reason apart from revelation is constrained to arrive, and the surmises with which some elements of tradition instilled into the current of human thought have made us familiar.

Pure reason informs us that God is unchangeably holy. Conscience or reason dealing with the moral question convinces us that we are guilty before God. And hence we are constrained to pronounce the inevitable doom of death upon the offender. Guilt precludes acquittal at the bar of heaven : unholiness renders fellowship with God impossible. Thus far reason speaks with an unfaltering voice. But whether God will have mercy on a sinner on any conditions or under any circumstances, reason is incompetent to pronounce. Yet whenever the question is mooted, it is perfectly clear that a broken law and a corrupt nature appear to be insurmountable barriers in the way of forgiveness, and that therefore among the conditions must be the satisfaction of justice and the restoration of holiness. This gives rise to two other equally vital questions : can God be just and yet pardon sin on any condition ? can He be holy and resume fellowship with the sinner in any circumstances ? Here we are at a dead pause in the absence of revelation. We await with solemn awe and interest the answer of heaven to these three momentous questions.

CHAPTER V.

INCLINATION.

Inclination is the bent of the will toward any object or act. When the emotive reason has formed an estimate, natural or moral, of the object contemplated, the propensity comes into play. An emotion matured into an estimate of things is either favourable or unfavourable; and hence it naturally produces in the one case attraction, and in the other repulsion. These two may be included under the common name of inclination, inasmuch as we may be said to be inclined to the absence of any quality to which we are averse.

MOTIVES and RESTRAINTS.—Motives are inducements to act in a certain way. Restraints are dissuaves from a particular act or course of action. It is evident that the motives to act are the inclinations of the will in their various forms and in the widest import which can be given to the term. The restraints are simply the various disinclinations with which we regard different objects and actions. These vary in degree from the merest turning of the scale to the categorical imperative. They may also concur or oppose one another in influence, and so involve in some cases considerations of great complexity and difficulty.

The inclinations flowing from the estimates of things are naturally divided in the same manner into the selfish, the unselfish, and the moral. The selfish fall under appetite and desire; the unselfish under taste and disposition; and the moral under justice and charity:

though it must be confessed that some of these terms are not exactly discriminated in popular usage.

I. SELFISH INCLINATIONS.—1. APPETITE.—We have already noticed the appetites in reference to the pleasure which accrues from their indulgence. They now come before us as propensities of our nature. Being common to us with the animal world they are instinctive, and therefore need, not cultivation, but regulation and restraint. They have a powerful and constant influence on our voluntary actions, and therefore rank among the most urgent motives. At times they have all the force of a physical and even of a moral necessity. They come before us in the plain practical questions, What shall we eat, what shall we drink, and wherewithal shall we be clothed? While the appetites are in themselves harmless, they are liable to pass from motives into temptations in two ways: first, when the object that excites the appetite belongs to another and we are tempted to appropriate it to ourselves; and next, when any appetite claims more than its due, and we are tempted to rob the other propensities of their dues, and so rush into riot and excess. The former is a temptation to direct wrong; the latter to indirect wrong. This is the more insidious temptation. It needs always some and often much clearness of view and decision of character to detect and resist these temptations. The leading appetites have been already enumerated.

2. DESIRE.—This is more comprehensive than appetite. It is drawn forth by all that produces mere pleasure or personal gratification. Hence it denotes the liking or longing we have for that which pleases, or for anything in so far as it gives pleasure. The foundation

of all desire, then, is the sense of pleasure, and, we may add, of pain. We wish for that which causes pleasure, and we wish away that which creates pain. Springing from the pleasures and pains of which we find ourselves susceptible, our desires are no less numerous and diversified in their character. They multiply also as our wants increase by experience, by habit, by education, and by general culture. They differ in their nature according to the source from which they come.

Desire and aversion require the accompaniments of wisdom and power to constitute a perfect creature. For desire ungratified is a state of unhappiness. Means for its legitimate satisfaction; and wisdom and power to apply them, are therefore essential to the perfection and happiness of the creature desiring.

HOPE AND FEAR.—Hope differs from desire in two respects. It looks to the gratification of the desire in question, not now, but at some future period. And it presumes the facility or possibility of attaining its object. This depends on the presence of means and the possession of wisdom and power to employ them for the desired end. Fear differs in some respects from aversion. It dreads not a present but a future evil, from which it is averse. It presumes the difficulty or impossibility of averting it.

Among the most familiar objects of desire are health, the useful, and rest. Health, as we have seen, is a boon of inestimable value, especially if we extend it to the mind as well as the body. The useful comprises a vast range of objects which are prized in proportion to their utility. Means to an end, and therefore money, tools, furniture, machinery, are to be classed among the useful.

Rest is peculiarly agreeable to the sons of toil; and to this lot man is born. Desires for all such objects are worthy and good. As they centre in self, however, they are no less liable to abuse than the appetites; and therefore equally need the regulation of equity and the restraint of benevolence.

II. UNSELFISH INCLINATIONS.—These denote such propensities as belong to our constitution, and yet do not proceed from a regard to self. They stand on the borderland between the merely selfish and the strictly moral. They flow from the susceptibility, but they are not prompted by self-interest. Their gratification affords a refined degree of pleasure, because their objects are higher, and because they are untinged by selfishness. Yet the absence of any personal reference constitutes in itself a subtle temptation to become cold and deaf to the calls of humanity. Hence the free indulgence of even unselfish propensities begets on the one hand an overweening self-complacency, and on the other a growing insensibility to the joys and sorrows of others. We have classed the unselfish inclinations under the heads of taste and disposition.

3. TASTE.—Taste as an estimate of things gives rise to taste as a tendency or inclination. This comprises those incentives which result from the pleasures of taste and of the imagination. It exercises a more or less powerful influence over the will, according to the state of culture which has been attained and the character of the mind on which it is brought to bear. When the intellectual and moral powers are healthy and vigorous, the æsthetic leanings will hold only a secondary and subordinate place among the impulses of the conduct; in which case

they tend to enhance the calm and tranquil flow of a happiness mainly dependent on higher considerations. And where the higher qualities of a rational being are sickly and feeble, the incentives of taste are valuable in imposing a certain check on the lower and grosser appetites of our nature, but are not capable of producing a mind of high intellectual or moral power.

4. DISPOSITION.—Under the head of disposition or temperament may be included those tendencies which are more nearly allied to the intellect or the will than to the sense. Philosophy, sociality, and courage find their place here. The love of liberty, activity, success, and rest follow in the same train. The moral impulses, regarded merely as tendencies, are often ranked as dispositions. The opposites of all these may also take the same name. The dispositions are of more importance than the tastes in determining the character, as they refer to a higher part of our nature, and, in the absence of conscious moral principle, often produce deeds of heroic virtue; tarnished, however, by the coexistence of habits which an enlightened conscience must condemn. When the heart is right, however, these dispositions stand around the moral principle as a prompt and powerful guard, and give rise to the noblest exhibitions of human character and conduct; while the absence of any of them involves a corresponding meanness or feebleness in the development of the moral nature.

III. THE MORAL OBLIGATIONS.—The moral inducements differ from the other inclinations in being imperative, and not merely persuasive. Under the influence of inclination, I wish; under the control of conscience, I ought. There are two leading branches of the moral

impulse, which are variously designated righteousness and goodness, justice and benevolence, right and love, equity and goodwill. The relation of these to each other has already been indicated under the head of the moral estimates.

5. **EQUITY.**—Equity, as a moral motive, is the determination to render to all their dues. In the moral systems of the ancients it was distributed into wisdom, justice, temperance, and fortitude. Wisdom is equity to the truth; justice is equity towards another; temperance is equity towards myself; fortitude is equity binding the power to struggle with difficulty. The difficulty is temptation, danger, or suffering. Of these four, wisdom is included in justice; and fortitude is rather resolution or decision of character than equity. Justice and temperance are the really important distinctions of equity; the opposites of which are wrong and excess.

GRATITUDE and INGRATITUDE.—Gratitude is a feeling of thankfulness to him from whom we have received good. As a motive it prompts to return good. Ingratitude, the absence of gratitude, is one of the most offensive forms of evil.

6. **GOODWILL.**—Goodwill is the queen of virtues: it transcends equity as the positive does the negative. For goodwill is the disposition to give of my own: equity is the determination not to take that which is my neighbour's.

LOVE and HATRED.—Love is here employed to denote the goodwill which is felt toward all, without regard to merit or demerit. To the unfortunate it displays itself in pity, to the guilty in mercy, and towards both in an

endeavour to restore the fallen to prosperity and uprightness. Towards the happy and holy it is manifested in a desire to gratify their wishes, as well as render to all their dues. These dues are only fully rendered when they proceed from goodwill. It is needless to say that honour to superiors, to parents, to the great Parent of all, is among these dues. Hatred is the opposite of love in all these respects, and includes apathy as well as antipathy. Its only legitimate object is wrong or evil.

CHAPTER VI.

WILLING.

The faculty of estimation brings into view an end that is for some reason agreeable. The agreeable in all its forms awakens inclination. Inclination leads to choice, which is the proper act of the will. Choice of the end involves choice of the means of its attainment. This opens the way for a new and wide field of intellectual activity in deliberating, designing, and planning. Every step in the process of thought or act affords new occasions for choosing.

Resolving is the next step in the exercise of willing, which consists in coming to a determination on the course to be pursued. Intention is the state of mind consequent upon forming a resolution to pursue a certain course. It is the constancy of the resolve made by the will. It may be called fore-ordaining the event, so far as it depends on the wisdom and power of the person intending, or on the means at his disposal. Purpose conveys the same meaning.

Willing is the actual and immediate determination of the will to put forth the power of the spirit in some act which is expected to bring us to or towards the end in view. This is the consummation of voluntary activity.

The act of the will is called a volition. Emotion is to the estimate of the mind as sensation is to intuition.

PART III.

POWER.

POWER is that faculty of the mind by which it carries into effect the behests of the will. Taken in its more general sense, indeed, it includes the understanding and the will, inasmuch as these are powers. But these have been already discussed, and power is here to be understood in a strict sense as the faculty of intelligently and spontaneously originating motion or action, and thereby affecting matter and influencing mind.

Power lies at the very root of a spiritual being. Long before consciousness comes into manifestation, power is busy at work preparing a fit vehicle and organ for the full-blown soul. That organ, in its final development, is the human body. It is quite evident that the power that is here in action is wielded by a being having an intelligent will at least in the bud. For the product is before us, indicating a successful effort of will ; and it is exactly adapted to the end to be attained, indicating a marvellous versatility of reason in the producer. The human body, and nothing short of it or other than it, is suitable to be the tenement of the human soul. It is a wild and unavailing task to speculate how the universe of things might have been otherwise constituted than it

is. It is even a bold and hazardous attempt to argue from the principles of reason that things are as they ought to be, and thus to draw out a philosophy of the universe. At all events, it is beyond our proper theme. But it is interesting to inquire what sort of organ is best adapted for a human soul in the present constitution of things, and to discern some rude traces of the perfect fitness of that wondrous achievement of unconscious power, the human frame, both for the soul that constructs and animates it, and for the scene in which it is to be employed. Merely casting a glance without intruding into the domain of physiology, we notice that as the soul has to move from place to place, to handle masses of matter, and to deal with mind, the body is provided with the legs, the arms, and the tongue, the simplest mechanical means of accomplishing these ends. As it has to become acquainted with things, form an estimate of them as agreeable or disagreeable, and apply them to the purposes of its will, the body is furnished with a three-fold system of sense-organs to serve these ends; the eye and ear to take cognisance of things, the nose and tongue to estimate the pleasant and the unpleasant, and the hand to manipulate in an endless variety of ways. It is to be remembered that these are only the leading uses of these various organs, which are capable of a multitude of subordinate applications. The plan and shape of the body adapted for the attachment and insertion of these limbs and organs; the arrangement of these in the best manner for the convenient and efficient discharge of their several functions; the solid bones for support, resistance, and impulse; the ball and socket, as well as other well-adjusted joints, for easy and

varied motion ; the elastic muscles for applying the motive power ; the subtle nerves for receiving and giving energy ; the complex apparatus of the mouth, stomach, liver, kidneys, heart, and lungs, for supplying the wear and tear of every part by receiving, assimilating, and distributing the proper materials derived from the animal, vegetable, and mineral world around ;—all these spring from the silent working of yet unconscious power. The total result, the human body, the living tenement of the now conscious soul, is found to be exactly adequate to the end required. It enables the indwelling spirit to expatiate at will within the range of its own being, and to maintain a free and full intercourse with the world around.

The grand theorem of physiology is :—Given a human soul and an outer world, to demonstrate that the human body is the fit organ of the soul and the adequate medium of communication between it and the surrounding scene. The present advanced state of this branch of natural science exhibits a splendid contribution to the proof of the theorem, and affords a fair prospect of a continued approximation toward its complete establishment. But antecedent to this question is the mysterious problem of a soul yet undeveloped, namely, to form by a blind power a meet instrument for its yet unfledged faculties in a world still unknown. Looking no farther than the naked spirit having merely a hold upon existence, the hasty thinker might be bold to affirm the impossibility of development in general, and in particular of the soul in its original unconsciousness building up the human frame from the nucleus of an organic seed, and at length emerging into a state of consciousness, which

is felt to be its normal condition. How can consciousness come out of unconsciousness, light out of darkness? How can the product of intelligent power precede the consciousness of such power? On the hypothesis of mere nature, it is impossible to controvert this conclusion. It is only another form, a new application, of the principle that nothing comes from nothing, that no effect can be without an adequate cause. Hence an unconscious unreasoning essence cannot come to consciousness and reason. So we are prone to reason antecedent to experience. But experience in this overturns our conclusion. It is an unquestionable fact that the human soul, as yet unconscious and unreasoning, forms the human body in which it ultimately comes to conscious reason. We are therefore compelled to rise from the admission of a system of nature to the acknowledgment of an intelligent Creator. To grow, that is, to rise from a lower to a higher level of ability and capacity, from a narrower to a wider range of faculty, is only possible for that which has at the ground of its very nature a potency and a Potentate at least as high as the highest level to which it can attain. This alone removes the difficulty. If there be development, there must be a Creator. Here is development from a latent power in a principle of spiritual life, Here is growth from the simplest element of rational life to its full development in a conscious, reasoning, willing, acting spirit. Here is therefore the inevitable indication of a Creator. There is no more sublime instance of development than the bursting forth of an intelligent spirit from the darkness of a previous growth into the full blaze of self-conscious activity, and therefore no more conspicuous manifestation, short of

creation itself, of an intelligent Author of the world of things.

Even after the soul has become self-conscious, there are times in our sleeping state when power shows its activity, while there is at least no memory of the movement. Many talk, and some walk, in their sleep without the slightest recollection afterwards of having done so. We cannot, however, be sure that there was no consciousness on these occasions. But when we reflect on the curious cases of a second consciousness, entirely cut off from the former one, so that neither memory nor habit remained, as recorded by Dr. Abercrombie and other medical men, we are disposed to think it probable that consciousness accompanies the proceedings of the somnambulist, though memory fails to recall them. Somnambulism, however, brings to light a curious power of apprehending the real conditions of surrounding things when the avenues of sense are more or less closed. This seems to be the dawning of a power in the soul to be aware of things by a subtle generic sense, apart from any special organ, or even without the intervention of the present body.

When power at length breaks forth into the morning of self-consciousness, it displays itself in the three forms of thinking, willing, and doing. Thinking may be divided into passive and active. Passive thought is the mere observation of the passing scene, reminiscence of the past, or wandering into the possible along a familiar train of association, without any effort of the will to regulate the order of succession or connexion. Active thought consists in selecting the objects of attention and recollection, and directing the current of association to a

definite end. It involves an effort of the will, and variously manipulates the gathered results of experience. In perception, consciousness, memory, and judgment, the mind may be in some measure passive. Imagination and reasoning find their native scope in activity. The former are comparatively tranquil powers of the mind; the latter afford the principal sphere of power in the understanding.

The emotions, estimates, and inclinations, that precede the proper action of the will, are passive in their character, and call for no effort or urgent display of mental power. Choosing, resolving, and willing, on the contrary, are active, and bring into exercise those energies of the imagination, judgment, and reasoning, which are involved in deliberating, designing, planning, and inventing.

The activities of the understanding and the will are merely preparatory to the rational and voluntary use of our power to excite the nerves, to put the muscles into action, and move our various organs and limbs, and through them certain parts of the outer world of matter and mind. There is, indeed, an involuntary exertion of power still going on, causing the action of the heart in circulating the blood, of the diaphragm in breathing the air, of the intestines in the peristaltic motion, and of the whole interior in carrying on the general functions of organic life. But with this we have at present nothing to do. Our business is solely with the power that is under the control of will and the eye of consciousness. We have now arrived at that which is the central essence of a spiritual being. For power, being the faculty of free energy—free as to the time, place, and

mode of its exertion—presupposes understanding to comprehend the range of its operation, and will to determine the circumstances of its evolution. Each of these would be cramped and maimed without the presence of power to carry out its intents and purposes: and hence they find in it the climax and consummation of their nature. Of the intellectual faculties, the imagination is the grand sphere for the expatiations of power. The imagination lays down the law by which it is to proceed; while the will brings forth the desire which leads to its exercise.

As the external world comes into active contact with the understanding through the organs of sense, so power proper comes into contact with the external world through the organs of action. There is thus a circle of influence from the outer world to the understanding, from the understanding to the will, from the will to the power, and from the power again to the outer world. And so we have a double experience of external existence, first by its effect on the sensibility of the mind, and next by the effect of mental potence on the external object.

After the soul has come to consciousness, power appears in its proper character, as the inseparable companion and complement of understanding and will. It may be classified according to its effect, which is either proximate or remote. Its immediate effect is muscular exertion in the several organs of activity. The principal of these are the foot, the hand, and the tongue. Hence arise the chief varieties of potential action—namely, moving, handling, and speaking. The ultimate effect of power is on the external world of matter and mind. It

moves matter and urges mind. In this respect, therefore, power is of two kinds—physical and moral.

Physical power is that which proceeds by sheer energy, and takes account only of material resistance. Its chief implements are the foot and the hand. It is remarkable that heat, gravity, and unsolid matter, as steam, air, water, are among the mediate sources of motion ; while solid matter, as limbs, levers, wheels, are only the conductors or directors of it. In like manner our minds, that is, ourselves, give the first impulse to the nervous fluids or fibres, in particular to the motor nerves, from which it passes to the muscles that clasp the bones of our arms, legs, and other limbs. These communicate and direct the motive force to certain parts of external nature, by means of which all the changes which man can effect on the world around him are accomplished. Experiment, trade, art, mechanical, chemical, and physical, come under this head.

Moral power is that which proceeds by moral suasion only, and takes account chiefly of the intellect and the will. Its grand medium is speech, the organ of which is the tongue. It is displayed in training, teaching, convincing, persuading, and commanding.

The despot has recourse to physical power for the ends of his unwarrantable ambition. The legitimate government of moral beings, as it must provide for the cases of the delinquent and the refractory, avails itself of physical as well as moral power for the restraint of the will. The Church deals only with moral suasion ; but appeals, nevertheless, to the awful sanctions by which the Judge of heaven and earth vindicates the immutable law of holiness.

The potential faculty, being associated with the intellect and the will, involves the consideration of potency, motion, action, speech, and practical method. Imagination, pertaining to the understanding and impelled by the will, is the guide of the potentiality.

CHAPTER I.

POTENCE AND MOTION.

On the occasion of touch, which is the physical characteristic of all the senses, a pressure or inbearing of force is felt. This is the physical element of every sensation in a mind capable of feeling, not only intelligently and emotionally, but also physically. This capacity of the mind may be called, for distinction, affectibility. Now, as action and reaction are equal and opposite, wherever pressure is felt, there must resistance be consciously made. This resistance or counter force, originating in the mind and exerted through the nerve in the muscular system, is the simple and primary outgoing of power. Pressure and resistance are the counterparts of the mind's physical power in conscious action. They are the passive and active states that co-exist in every case of interaction. They correspond to the passive and active sides of sensation and emotion. All sensation, but palpably that of touch, is the contact of forces, the force of the external object and the encountering force proceeding from the mental power within. Power has thus become patent in and to the energising mind: I am henceforth conscious of possessing native power. Power in actual exercise may be properly called

force. The forces of nature are the constant outgoings of the power of its eternal Author. And the muscular force that counteracts or overcomes external force is the transient outgoing of mental power.

This force appears in the muscular exertion put forth by mental power at the instance of will. It is more or less actively employed in all sensation. It is also displayed in every position we take or resistance we put forth. Standing or sitting is the result of pressure and the counterpoise of a variety of muscles. Holding up the leg, arm, or head is an example of force voluntarily exerted by the power of the mind. The arms are so attached that they meet each other, and thus are able to hold or hug a large body. The thumb is similarly opposed to the other fingers, and hence the hand can grasp, hold, or handle a small body. The thumb and fore-finger can pick up a very small object. The jaws have great force of pressure and tenacity. These are some of the ways of applying force for the mere counter-acting of force. The bearing of all weights or burdens is a simple counterbalancing of the force of gravity. The checking or stopping of a moving body is merely opposing force by force.

Force, however, not only stops force, but, when in excess of the opposing force or when there is no opposing force, produces motion. Motion is of two kinds, involuntary and voluntary. So far as it is purely involuntary, it belongs to physiology. Motion, voluntary and habitual, comes within the range of mental philosophy. In a wide sense, it comprehends all voluntary action. But at present we limit it to the locomotion of the whole body, to the motion of its various limbs, and to the

motion communicated to other bodies by means of the hands and feet.

The rudest form of motion is that of the whole body. It is effected usually by the feet, or, in the earliest efforts of the infant, by the hands and feet. Creeping is the carrying and pushing forward of the body on all fours. Walking is the normal progress of the human body, accomplished by the feet alternately pressing on the ground as a fulcrum and propelling the body. Running is a more rapid mode of locomotion. The unit of progressive motion is a hop with the one foot, a step from the one to the other, or a jump with both together. The distance traversed by one foot each time it is lifted in walking is a pace, which is therefore equal to two steps. Besides the progressive motion, I am able to turn round my body, and so give myself a rotatory motion.

A great variety of motions can be performed by the parts of the body. By means of the joints at the hip the body can be bent forward at least ninety degrees; and by the vertebræ of the back-bone it can be slightly curved in any direction. By the joints in the legs they can move through nearly a semi-circle at the hip and a quadrant at the knee. Hence we can assume the standing, kneeling, or sitting posture. The arm is so jointed at the shoulder that it can reach any point in a quarter of the sphere of which it is the radius. The two hands therefore can traverse a hemisphere. When the arms are at full stretch in a horizontal direction, the distance from tip to tip of the fingers is about a fathom, two yards, four cubits, or six feet. The fingers are so jointed as to have nearly a quadrant of movement at each joint in the forward direction. The head has a vertical and

horizontal motion, which, aided by the similar motion of the eyeball, enables me to direct my attention to any object within the front hemisphere without moving the body. The under jaw moves on an axis about thirty degrees. The eyelids may be opened and closed at will; and so may the lips. The tongue, being simply muscular, has a free motion in every direction. The features by an almost involuntary movement express a wonderful variety of emotion.

Motion can also be transferred to external objects in various ways. If, by means of a pole at the shoulder resting on the ground, or other contrivance, the body acquires the stability of a fulcrum, the feet can propel a boat. By the oar, having its fulcrum in the water, the boat is moved by the movement of the hand. By mounting the steps fitted on the rim of a wheel, the weight of the body communicates to the wheel a rotatory motion. By means of a foot-board, a switch, and a crank, the spinster turns the spinning-wheel. The lathe and the velocipede are set in motion by a similar contrivance. . By a crank with a handle or some kind of lever acting on an axle, the hand can produce a rotatory motion. A small stone or other mass can be projected to a considerable distance by the centrifugal motion communicated by the hand moving rapidly through the arc of a circle. Larger bodies may be raised or carried, and still larger rolled or tumbled by the hands. By the combination of hands and mechanical helps, very large bodies may be put in motion.

A stroke or impulse is produced by one body in motion coming into violent contact with another. The result is equal to the force employed in checking, alter-

ing, or originating motion. Kicking, stamping, and digging are different modes of impulse by the feet. Clapping, slapping, striking, are among the modes of impulse by the hand. The lower jaw impinges upon the upper in biting and chewing. Pulling, plucking, twisting, wrenching, are among the reverse modes of applying force.

CHAPTER II.

ACTION.

Under this head we include most of what is usually called action, but especially the kind of action which affects matter. Physical power has the hand for its chief implement. The intelligent agent begins with experiment, proceeds to habit, and in special cases diverges into trade and advances to art.

EXPERIMENT begins with infancy, and goes on through life. It is tentative effort, or the voluntary putting forth of muscular exertion in some direction, with the eye open to mark the result. It therefore involves the understanding and the will. Mere energy, without these, is a different thing. By this effort twice or thrice repeated we learn, not only the result, but the way to act in order to obtain it. By-and-by we conceive an end which we wish to obtain, and make tentative efforts to accomplish it, and in most cases eventually succeed or learn the reason why we do not or cannot. We also watch the doings of others, and by imitation come to do the same things. Having done some things, we have examples and analogies which guide us in devising and executing other feats. We become ingenious in contriv-

ing and putting in practice methods of doing things. Such is experiment, to which we can set no limits within the pliability of human organs and the capability of human imagination.

HABIT is expertness in a certain course of action. By repeated doing of the same thing, we get a facility of doing it. Habit is the custom of performing a process without attending to the details. Many of these habits, such as rising, standing, walking, are common to the whole race. They are generally means to an ulterior end which occupies the chief attention. Even on the score of utility it is important that they be well formed, that is, at the least expense of time and effort. But when the actions from which they result belong to the region of morality, it is incumbent on us to avoid that which is evil, not only because it is evil, but because a habit of evil-doing is a bondage which it is extremely difficult to shake off.

A TRADE is a special habit or system of habits, which is a means of gaining subsistence or comfort. The habit of performing a particular process displays itself in one more than another. Hence he becomes an expert in this department of labour, and pursues it, not only for himself, but for others who have not the same facility or are busied with other occupations. A trade is thus a special business, for which anyone has acquired a readiness either by trial or by training. It is generally a rude mechanical practice, capable, however, of a growing refinement according to the capacity of the operator and the requirements of the employer.

An ART is a trade founded on science. It differs from a mere trade in not being merely empirical, and in being

sometimes pursued without reference to gain. The term art indeed, in its original use, was nearly synonymous with science, or, at all events, denoted practical science. It is plain that trades may rise to the rank of arts by reducing their rules to scientific principles. Such principles lie at the root of all practice.

These forms of action display themselves in mechanical, chemical, and physical processes. Mechanical processes arise from the reciprocal action of masses of matter in solid, fluid, or gaseous states. Chemical action is occasioned by the intervention or attended with the evolution of heat in its various forms. Physical processes are connected with organic life in the vegetable and animal kingdoms. These three manifestations of power may have been nearly contemporaneous in their origin. But the physical was perhaps the first to make its appearance, the mechanical second, and the chemical last. Man required first of all food, then shelter, and lastly fire. Food is procured chiefly from living organisms; shelter from masses of matter; and fire from the contact or friction of inflammable materials. The mechanical was, however, the first to attain to scientific exactness. The chemical processes, though the latest to be pursued in a philosophical way, have surpassed the physical in their extent, connexion, and certainty.

Among the mechanical arts are to be included gathering fruits, hunting, field labour, masonry, carpentry, smithcraft, architecture, spinning, weaving, sewing, mechanics, the pipe, and the harp. Gathering the ripe fruit of the tree or plant is the simplest mechanical process for the sustenance of the body, or rather the satisfaction of the appetite. It involves the action of

the feet in walking and the hand in plucking. It is the beginning of all heaping up and hoarding for future use, which take many new forms in after times. Hunting is the pursuing and catching of animals for the purpose of food or clothing. It assumes the various forms of fowling, fishing, and hunting commonly so called, which have afforded to mankind so many kinds of occupation and amusement. Angling, netting, snaring, throwing the stone, shooting the arrow, hurling the spear, striking the death-blow, are among the primitive modes of drawing subsistence from the fish of the sea, the fowl of the air, and the beast of the field.

Delving and digging are mechanical efforts of power that lie at the root of all field labour. They are diversified in tilling the ground, making of roads, and working of mines. Even walls of dwellings were built of soft clay, which was dried and hardened in the wind and sun. Striking, driving, and pushing are the simple efforts of power put forth in building, joining, and welding, the trades of the mason, carpenter, and smith, who work in stone, wood, and metal. The primitive abodes of men were made of earth, stone, or wood; according to the supply of material and the exigency of the climate. The earthen cabin with the close of rude stones, and the tent of rough wood with the surrounding mound or dike of clay, were nearly contemporary. The tent and the keep were early: the former serving for the open country, where no danger was near; the latter for the wilderness or the forest, where the wild beast had its lair. Wooden articles served for the furniture of the primeval dwelling, and for many purposes of agriculture. Working in metal, especially copper and iron, was practised at an

early period to supply the tools used in other trades, and the weapons employed in hunting or war. This presupposes the processes of mining, smelting, and alloying. In some countries the stone, bronze, and iron ages have been distinguished; and they have been supposed to succeed one another uniformly in this order. It is more probable, however, that the interval between the origin of stone, bronze, and iron implements was brief, in every instance far too brief to be counted as an era.

The necessity of clothing called for the operations of spinning, weaving, and sewing. These must be preceded by the invention of the implements, however rude they may be, by which they were performed, as well as the preparation of the materials, whether animal or vegetable, which were suitable for the distaff and the loom. The skins of animals, raw or tanned, afforded a material for clothing that did not require these instruments.

To these useful arts may be added the invention and use of the harp and the pipe, as a specimen of the amusing arts, which became at a later period so numerous and diversified.

It is obvious that we have here before us the germs of architecture, machinery, and the fine arts. But many of the most splendid achievements of mechanical genius are yet without a representative. And we must examine the history of man, and survey the monuments of the past, before we descend to modern times, if we would form an adequate conception of the vastness and versatility of human power. The Cyclopean walls of the Pelasgians, the pyramids and obelisks of Egypt, the walls of Babylon, the stone lions and oxen of Nineveh, the columns of Palmyra and Baalbec, the temples,

statues, and paintings of Greece, the roads, aqueducts, and viaducts of Rome, display a magnitude of power and a sublimity of genius which have not been surpassed by any work of after ages. To these have to be added the magnificent achievements of modern times in these and other walks of mechanical invention. The spinning mill, the weaving factory, the locomotive, and the steam-vessel stand at the head of all the machinery, for every conceivable purpose, which crowd our workshops, magazines, arsenals, docks, and factories of every kind.

The chemical arts have their birth in the discovery and use of fire. The smelting of metals, and the forging of implements for the various ends of war and peace, seem to have followed soon after. The desire to prolong life and to multiply the precious metals gave rise to alchemy. When at length men ceased to aim at the transmutation of one substance into another, and sought to discover the simple elements of matter and the affinities by which these were formed into compounds, and these compounds again resolved into their simples, alchemy was changed into chemistry, which began about the seventeenth century to assume the shape of a science founded upon the ascertained facts of nature. Experiment now became a scientific process, directed, not to arrive at a foregone conclusion, but to discover the yet unknown active and dynamical relations of matter. Human power, inspired by genius and impelled by will, now displayed its trophies in the appliances which were constructed for penetrating into the secret ties of nature, and in the practical uses to which the discoveries thus made were turned. The manufacture of soap, pottery, glass, and the preparation of the various simples and

compounds for the necessities and embellishments of life, came early. The magnet has revolutionised navigation. The lens has immensely extended the field of practical astronomy. Steam has amazingly multiplied production and accelerated travelling and transport by sea and land. Electricity has flashed intelligence round the habitable globe. Photography delineates with exquisite truth the forms of persons and things in which we take an interest. The bleaching process has been investigated and improved. Manures have been scientifically studied and compounded. Sanitary precautions have been devised and adopted. Medicines have been analysed and multiplied.

The physical world has its two great departments, the vegetable and the animal. The former yields the various arts of agriculture, such as tillage and gardening; the latter, the breeding and grazing of cattle, and the application of the animal to the use of man. There is scarcely any part of a plant which has not been applied to some useful purpose. The root, the tuber, the wood, the bark, the outer fibre, the leaf, the flower, the seed, and the fruit have their uses. It is not to be wondered at, then, if the culture of plants has occupied a large share of man's attention and industry. Almost every plant of culture has its own habitude, and therefore its peculiar mode of treatment. The trees, the herbs, and the grasses demand their special arts of training. After gathering in the harvest of raw material come the various arts, by which it is prepared for food, clothing, shelter, or other convenience. The culture of the vine, the palm, and similar plants, the treatment of their juices, the arts of brewing and distilling, yield us our

drinks. The mills and other machines for cleansing and grinding the various grains, for making sugar and other commodities, the arts of baking and cooking, supply us with all kinds of viands. Another series of arts and machines is necessary for the dressing, spinning, and weaving of flax, cotton, hemp, and other vegetable products for clothing, furniture, and cordage. In the woods we have a vast variety of material for the construction of huts, furniture, machines, and ships. In the bogs and coal measures we have immense stores of fuel. And in the refuse of every kind of plant we have materials either for firing or manure. Here is a vast field for the exercise of human power.

Some animals have been domesticated for the purposes of food, raiment, and labour. They supply us with milk, butter, eggs, and flesh-meat. Their wool, fur, hair, feathers, and skin are variously used for clothing. Some of them draw the plough, the harrow, the wain, and bear the rider or the pannier. The training of these animals, and their adaptation to all these uses, require the exercise of a great many familiar trades. The fishes, wild birds and beasts, demand in general no kind of care for sustenance or training on the part of man. But they are pursued, caught in various ways, protected occasionally, and finally used by man for food, lighting, clothing, and self-preservation. Man himself belongs to the animal kingdom. Hence physiology takes a lofty place among the studies of the human mind. This gives rise to the medical and surgical professions, and the business of the druggist and the apothecary. The vegetable and animal kingdoms afford a far more valuable contribution to the *materia medica* than the mineral. The great object

of the healing art must be to facilitate the action of the *vis medicatrix naturæ*. The manual part of the medical art belongs chiefly to the surgeon.

From this rapid survey of human action it will be seen how manifold are the operations of human power as exercised by the hand. The limit of its applicability has not been approached. New objects to be attained have presented themselves to the mind only to call forth new evolutions of manual dexterity. The field of manual activity will be found to be vastly enlarged when we come to the power put forth by the tongue.

CHAPTER III.

SPEECH.

Man is by nature social, and hence he seeks a medium of communication with his fellow. He is also rational, and therefore he has to communicate matters, not of instinct only, but of perception, consciousness, memory, judgment, and reasoning. He is, moreover, emotional, and hence he needs to give utterance to the feelings of his heart. And, finally, he is imaginative, and therefore competent to devise signs of all the various objects of his mind and will. By a hint from nature the articulations and modulations of the human voice have with one consent been adopted as the signs of all that comes before the human mind. Speech, taken in a large sense, is either articulate or inarticulate. Articulate speech has either an intellectual or a moral end. The highest form of inarticulate speech among men is music.

I.—ARTICULATE SPEECH.

The tongue, with the adjacent parts—the larynx, the palate, the teeth, the lips, and the nose—is the great articulator of the human voice. Hence the wondrous art of human speech. We have first to attend to the elements of articulate speech. We have already noticed that these consist not only of sounds or vowels, but of stops or checks of sounds, that is, of consonants. By sharply stopping the sound at the throat, the gums, and the lips, we get the three sharp mutes, *k, t, p*. By flatly stopping the sound at the same points, we have the flat mutes, *g, d, b*. By sharply checking the sound, we obtain *kh, th* (as in think), *f*; and by flatly checking it, *gh, dh* (*th*, as in this), *v*. By a slight compression we get *h, y, w*. By stopping the side passages with the tongue against the gums, if we trill the sound passing at the roof of the mouth, we make *r*; if we hiss or hush sharply, flatly, or forcibly, we shall get the various semi-vowels expressed by *s, sh, z, zh, ts, tsh, ds, j*; and by stopping the passage within the gums and allowing vent outside, we make *l*. By stopping the passage through the mouth at the aforesaid points, and sounding through the nose, we have *ng, n, m*. By a mere conformation of the organs of speech at the same points we obtain *i* (*ee*), *a* (as in pa), *u* (*oo*); and by such conformation at the two intermediate points we sound *e* (*ae*), and *o*. We thus arrive at the five open vowels, *i, e, a, o, u*, as in he, hay, ha, hoe, who. By adding the closed sounds, as in pit, pet, pat, pot, put, we are provided with ten vowels. These, with the twenty-eight consonants already given, constitute an alphabet or set of elementary sounds and

joints of sound addressed to the ear, by the diversified combinations of which we are able to produce an unlimited variety of words or audible signs expressive of every thing, quality, relation, thought, deed, or event within the range of human experience or imagination. Some other modifications, both of the vowel and the consonant, are found in particular languages, on which this is not the place to dwell.

We shall be very far astray, however, if we suppose that the process thus sketched was the actual history of the formation of human language. Speech is a concrete thing. The original speakers thought not of elementary sounds, nor even of the parts of speech. The first articulate utterance intelligible to man was, no doubt, a sentence, a simple sentence, indeed, consisting of a single utterance, a command, or a simple assertion. When the cry "Abraham!" is heard, the meaning of the speaker is, "Let Abraham attend to me, or come to me." When the builder cries "Mortar!" the meaning is, "Bring me mortar." The single word *pluit* (it rains) means that rain falls. The single utterance *audiverint* conveys the meaning, "They shall have heard." Here we see that the fundamental part of a sentence may be either a noun or a verb, and that much of the rest of it is understood by the gesture, tone, or even the situation of affairs. From such beginnings as these language is a growth and a development. A formative language is a fruitful field abounding in roots, which send forth stems and full-grown vocables. The roots are in reality inseparable from the stems, and the stems from the concrete words. Even the so-called parts of speech do not stand alone in the primeval utterance. By an after process of abstrac-

tion the parts representing things and events come out from the concrete sentence into distinct expression. These are called by pre-eminence nouns and verbs (names and words). The noun is now a concrete sign, indicating not only the person or thing, but by its formative ending, the gender, number, and case. The case expresses the relation in which the thing stands to something else expressed in the sentence. A notable quality of a thing then comes to be signalised by a word placed generally before, sometimes after, the name of the thing. This word of quality is called an adjective, and agrees with the noun in gender, number, and case. The verb is also a concrete word and denotes not only the event, but, by its ending or variation, the person (whether speaking, spoken to, or spoken of) doing or suffering, the number, and sometimes the gender, and also the time and mode of the event. A notable circumstance of the event may be expressed by a word qualifying the verb, called an adverb. As the persons and things introduced in conversation have to be often mentioned, and sometimes with emphasis, the substitutes for them, that appear as person-formatives or suffixes, come to have a separate standing as pronouns, distinguishing the speaker (I), the person spoken to (thou), and the person or thing spoken of (he, she, it), the person or thing referred to (who, which, that), and the person or thing inquired after (who, which, what?). Verbs, adjectives, and adverbs have also certain convenient and familiar substitutes, which help to abbreviate language, as do, this, that, my, thy, his, her, its, our, your, their, whose, now, then, when, here, there, where, and the like. The relation of one thing to another comes at length to be

distinctly indicated by a preposition ; that of one event to another is in like manner denoted by a conjunction. Any sudden emotion may be expressed by an interjection. Prepositions, conjunctions, and interjections are also, like the pronouns, substitutes—the first two for phrases expressing the corresponding relations, and the last for a sentence expressing the emotion in question. In some respects these substitutes are the most abstract words in the language, as they express indiscriminately all persons, things, relations, and emotions. Thus from the primeval sentence conveyed in a single utterance by a process of abstraction, occasioned by the exigencies of experience and practice, the several parts of speech come forth into distinct utterance.

By the pliant versatility of the plastic power a single root lies in a noun, a verb, an adjective, or an adverb ; as, wit, to wit, wise, wisely. A verb gives a verbal noun, adjective, adverb ; as, to ply, a ply, pliant, pliantly. A noun supplies a denominative verb, adjective, adverb ; as, man, to man, manful, manfully. An adjective produces an attributive noun, verb, adverb ; as, brave, bravery, to brave, bravely. These relations might be fully illustrated from the classic languages of antiquity. Composition serves still farther to diversify and complicate the meaning conveyed in a single utterance ; as, welfare, penmanship. Some of the previous examples are really compounds.

The sentence, though originally a single utterance, is thus at length broken up into parts of speech, and runs from two or three to an indefinite number of words. Sometimes we have sentence within sentence and clause within clause, the principal sentence binding all the

subordinate ones into a single grand whole. The period displays all the gravity and stateliness of its march in the magnificent language of ancient Greece. Sentence follows after sentence and period after period, until the entire range of thought has been wound up, and then we have the discourse.

It is important to observe that the thing signified by language is the object of contemplation or attention, and not the act. Thus, in perception, the noun denotes the person or thing perceived ; in consciousness, the mental state of which I am conscious ; in memory, the thing remembered ; in imagination, the thing conceived ; and in judgment, the sentence expresses the state or relation of things perceived, remembered, or conceived. Nouns are divided into proper and common ; the proper denoting certain individuals, the common signifying each one or more of a certain species or genus. The former, and sometimes the latter, denote real things, as Alfred, the Queen, mankind. The latter, and sometimes the former, denote ideal things of a certain class, as triangle, Utopia, Waverley. The question, whether ideas, that is properly objects of imagination, had any reality, and wherein it lay, was keenly contested by the schoolmen of the Middle Ages. Ideas in this proper sense have no real existence whatever. The Realists, however, contended that they had a reality somewhere. The Nominalists held that they had no reality except in the name. They were right in so far as the name was intended to signify, not the conception or act of the mind, but the concept or thing conceived. The name, however, was merely the sign of the concept ; and the reality of the name when pronounced or written did not involve the reality

of the thing named. It merely involved its ideality. The Conceptualists hold that the conception or act of conceiving was the thing named, and had therefore certainly a reality. Their error is the supposition that the name applies to the conception; whereas it applies in fact to the object conceived. It is quite plain that the term man means not the conception, but the concept; not the act, but the object of the contemplative mind. The confusion will be removed by making the proper distinctions. The thing named is uniformly the object of the attention, not in any case the act of attention. This object in perception, consciousness, and memory is invariably a real individual thing, and may have a proper name, and in persons always, in some domesticated animals and in places usually, has a proper name. In imagination, however, if we think of a definite individual, it is real or ideal as the case may be. Europe is real; Utopia is ideal. But if we think of an indefinite or abstract individual, whether quality or thing, whether special or general, it can only be ideal. There is in the case of a so-called abstract term no reality corresponding to it. The notion or conception exists in the mind; the general idea or thing conceived does not exist. The name of such general idea is a general term, which itself exists momentarily when uttered or permanently when written, but has no real entity corresponding to it. Hence, in the case of abstract ideas, the Realists were wholly wrong, as such ideas have no reality; the Nominalists were right in finding the only objective reality in the name; the Conceptualists were right in recognising the reality of the conception, but wrong if they imagined that the conception was the thing named;

and they were still more astray if they supposed that the act of the imagination was itself at the same time the object of imagination. This error has introduced lasting confusion into the theory of thinking and naming, and has deceived even the strong and clear minds of some of the ablest philosophers.

To make this matter plain once for all, let us bear in mind that every conception or act of conceiving is actual. When the mind contemplates a single definite object, whether thing, quality, or relation, this may be real or not, as Queen Elizabeth or Queen Mab, this colour, that circle, the present age. But when it contemplates quality abstracted from any actual thing in which it exists, or thing abstracted from the circumstances of reality or from existence itself, this object has no real existence, as colour, power, man, triangle. The mind for its occasions contemplates and names such objects without attaching existence or the circumstances of concrete reality to them. Yet the quality, it is known, can have no existence apart from the substance, nor the thing apart from all the accidents of existence. Let us also bear in mind that an idea, as we use the term, is the object of the imagination, and therefore totally distinct from the act of the imagination, that is, the notion or conception of which it is the object. As we can contemplate such objects of imagination, whether borrowed directly from things or qualities by abstraction, or composed of such materials by the constructive faculty, and have occasion to converse about them, we give them names as freely and readily as we do to extant individuals. With the exception of proper names, as James, Bucephalus, Ireland, and a few proper adjectives, as

British, American, all other nouns and adjectives, and all other parts of speech, are expressive of abstract things, events, qualities, relations, and conditions, or, in other words, of objects of imagination, or, as they may be conveniently called, ideas, things in general, considered without entertaining the question whether they exist or not. Among these abstracts of imagination there is none more wonderful than the verb to be, which has a variety of meanings, each more abstract than the other. For example, we say that objects of imagination are not, that is, they have no real existence in the nature of things. Yet, on the other hand, we can say quite intelligibly that there are objects of imagination, meaning simply that we have the faculty of imagination, without implying that its objects have substantive existence. We learn from all this that abstraction is one of the earliest and most habitual processes of the mind, since it furnishes the objects of which the signs form the main staple of our whole vocabulary.

This fact leads us naturally to the principle which guided men to the articulate sound most suitable to express a given thought. This principle we conceive to be *analogy*. Let us remember that a word is the sign of a thing. Now, every natural sign is the result of an effort to indicate the thing meant by some gesture or cry bearing a resemblance, or at least analogy, to it, or to some one of its prominent characteristics. The original utterances were no doubt accompanied with eager gesticulations, helping out the significance of the words. These articulate sounds, when successfully interpreted by the hearers, would be at once accepted by a tacit convention as the signs of the objects in question.

If different articulations should happen to be invented to signify the same thing, the more apt would generally gain the day and exclude the others from the field. A particular case of this principle, acknowledged on all hands, is onomatopœia, or the naming of sounds or objects remarkable for their sounds by articulations imitative of these sounds ; though it must be confessed that the Greek name is general, and far from indicating imitation or any other principle. This practice holds in all languages. Our own is particularly rich in words imitative of the sound. Thunder, brattle, rattle, murmur, rumble, grumble, roar, groan, dash, crash, smash, splash, wash, bark, bray, cackle, are instances taken at random, and the list might be enlarged at will. As examples of the more comprehensive principle of analogy we may compare rough and smooth, hard and soft, heavy and light, dark and bright.

The speaker, in the effort to indicate the thing meant, utters a combination of articulate sounds, as the natural representative of the object in question or its prominent characteristic, accompanied it may be with appropriate gestures. If the hearer is unacquainted with the object, he has no other knowledge of it than the vague impression conveyed by the name. This name, however, has been prompted by the exquisite nicety of discrimination, which characterises the primitive man in the exercise of his full-grown and unimpaired powers, the purity of his native taste, and the fine susceptibility of his soul to the phenomena of the newly-risen world. The hearer, equally alive to the sympathies of nature, may carry with him this really, though as yet indefinitely, expressive name : he meets the object, is struck with

the resemblance, and is instantly in possession of his friend's meaning. This, however, is an extreme case. He may have seen the object before, and received from it an indelible impression. He marks the expressive utterance and the significant gesture, catches the resemblance, however evanescent, and understands the speaker. Or, lastly, the object may be present, and the propriety and meaning of the names may be at once recognised. There is indeed, in a strict sense, no resemblance or ratio between the sounds of the voice and the things of the world. But in the region of imagination there may be a relation or analogy even between things that have no natural resemblance. This subtle sense of the harmony of things, otherwise incompatible, was more intense in the early than in the modern mind. And hence the naming impulse was more vigorous, and was put forth with a happier truthfulness of expression in the infancy of the human race than at any later period in the history of the world.

The variety of consonants we are capable of uttering admits of several combinations, any of which may with more or less felicity suggest the thing intended. This is obvious from comparing the terms used in various languages for the same thing. Thus rough, *asper*, *τραχύς*; heavy, *gravis*, *βαρύς*; hard, *durus*, *σκληρός*, though different, have each a certain analogy to the quality intended. The difference depends on the degree of susceptibility, discrimination, and eloquence, so to speak, of the original inventor. Hence the tribe that is pre-eminent in the powers of observation, abstraction, and imitation will work out the most expressive language. This may be called the principle of taste, which con-

tributed very materially to the formation of different languages.

The growth of language was facilitated, and at the same time complicated, by the use of metaphor or figure, by which the name of one thing was transferred to another that had at the time an obvious resemblance or other relation to it. Hence many of our abstract words have a great variety of shades of meaning, founded on relations more or less transient and liable to be soon forgotten. The use of figurative language gives a sparkling vivacity to style, as long as the figure is fresh and obvious. But when by frequent use the metaphor ceases to be noticed, the word subsides into the mere commonplace of having a second meaning. The use of metaphorical language is owing partly to taste and partly to necessity. The taste for the exciting, the illustrative, the brilliant, or the humorous, leads to the employment of the metaphor; and hence it is familiar to the wit, the orator, and the poet. The necessity arises from the amazing variety of things that have to be named, and partly from the peculiar abstruseness of some of the objects of discourse. Hence language, if an equal copiousness of vocabulary were allowed, would become cumbrous and burdensome to the memory. This begets a tendency to abridge or economise words as much as possible. This is done not only by the process of abstraction, but also by the use of metaphor, that is, by transferring a word to another thing that is fancied to be anyhow akin to that which it properly signifies. This new meaning is at first figurative, but at length may become merely secondary; and thus a word may come to have a variety of secondary meanings. In this

way the word is raised to a generic sense, including a great number of specific senses. We have only to open a good dictionary of any language to have before our eyes the immense variety of meanings attached to most of the words, and especially to prepositions, verbs, and nouns. The more abstruse or unusual objects of thought are frequently expressed in figurative language, or by the secondary meanings of words. The subjective, the mental, and the moral are more abstruse or less familiar than the objective and the material. Hence many of the objects of consciousness are expressed by the secondary meanings of words primarily applied to objects of perception. The unseen and the future are likewise remote from observation ; and hence prophecy has to be largely expressed in terms borrowed from the visible and the present.

Metaphor embellishes the style of the orator ; but it embarrasses the path of the philosopher. For the exactitude of science the latter wants one word to stand for one thing. He is therefore greatly perplexed when he finds almost any relation whatever made the occasion of attaching a secondary meaning to a word. From the nature of his researches he has to deal largely in these secondary meanings. And one main cause of all the disasters that have befallen the metaphysician has been the unnoticed shifting of his fundamental words from one meaning to another in the course of his discussion, so that what was true in the former meaning is often very far from the truth in the latter. Hence he is compelled to have recourse to distinction and definition at every point, if he hopes to escape from the snares and pitfalls by which he is beset. Under the same name are

often confounded the concrete and the abstract, as the cause and the causer; the power and the act, as *perception* for the faculty and the act of perceiving; the cause and the effect, as *smells* and *tastes* for the qualities in the objects and the sensations they produce; the thing thought of and the thinking of it, as the word *idea* in the philosophy of Locke and others; one respect and another, as the *infinite* in a certain respect and the infinite in another respect or in all respects. Under the same name also are sometimes concealed two middle terms, vitiating an argument; under two names the same thing is sometimes successively presented as if it were two different things, as in the *petitio principii*. Many a bright and many a sombre fabric of human speculation, founded on one of these or similar confusions, has been scattered to the winds by the wand of a simple distinction between things that differ, though familiarly called by the same name.

We have already seen that a tacit convention between the speaker and the hearer is necessary to the adoption of a common language; and hence some have concluded that language is purely conventional, and that this is the whole account of its origin. But even in algebraic signs it is obvious that some one must have been the first to suggest them before any convention could take place, and that he must have been guided by some principle of reason in making the selection. The obvious imitation which accompanies all natural signs suggests the principle which lies at the foundation of all human speech.

The analysis of the sentence into the parts of speech affords a striking illustration of the theory of the mind.

The following sentence contains all the parts of speech:—

And chiefly Thou, O Spirit, that dost prefer,
Before all temples, the upright heart and pure,
Instruct me, for Thou know'st.

1. The sentence as a whole expresses the *object* of the *mind* in *thought*. It is a product of mind, and at the same time a sign of that which is before the mind. Its central word, "instruct," describes the *act* of *another*.
2. The sentence is analysed into the so-called parts of speech. This in itself is a mighty achievement of the *abstracting* and at the same time of the *intuitive* power. The alphabetic writing of the sentence exhibits a specimen of the latter of the two great acts of abstraction, the syllabarium and the alphabet, successively performed by the Phœnician and the Grecian minds. Moreover, every single word in the sentence is expressive of an abstract idea, and some of them, as the pronoun, the preposition, and the conjunction, of ideas peculiarly abstract.
3. The verb, the chief word of the sentence, "instruct," expresses *action*, which implies *power*, the all-including property of mind, which in itself implies *intellect* and *will*. It happens in this case that the verb "instruct" denotes an *intellectual* act, "knowest" a *habit* of the *understanding*, "prefer" a *propensity* of the *will*, and "dost", an act of *power* in general. The principal verb, moreover, is in the mood that expresses command, encouragement, or petition, which are processes of the *will*. The verb denotes in general any *event*, *state*, *mood*, or *relation* whatsoever, either of *external* nature or of the *internal* mind, as *existing really* or *ideally* in past, present, or future *time*, and therefore indicates a mind having three leading faculties—understanding, will, and power,

and capable of apprehending and representing in words all the conditions of the world of observation. 4. The noun is the name of some person, thing, quality, or relation, concrete or abstract, extant or imaginary. In the present case "Spirit" is *another intelligent being*, "temple" an *external material* structure, used in a highly figurative sense, "heart" an organ of the human body, employed in a metaphorical sense to denote a *moral being*. The noun implies the powers of *perception, consciousness, memory, and imagination*, and denotes *mind and matter* in all their forms. The pronoun is an extremely abstract substitute for any noun whatever when standing in the relation of speaking, being spoken to, spoken of, or referred to. It is evident that this very abstract idea of any object of thought is provided with a name simply for the exigencies of conversation. In the present instance "me" refers to the speaker, "thou" to the person addressed, and "that" to the person before mentioned. And speech implies the *intelligence and sociality* of the speaker. 5. The syntax of the noun with the verb, or with another noun in the sentence, expresses *action, passion*, and an indefinite number of other *relations*, and indicates the thing named as affecting, affected, or otherwise associated with the events or objects mentioned. Thus the "Spirit" does, prefers, instructs, knows; the "temple" is behind the "heart;" the "heart" is the object of preference, and "me" of instruction. The formative endings of the verb denote *person, number, tense, mood, and voice*; those of the noun *number*, and certain *relations* that are otherwise expressed by prepositions. 6. All the other parts of speech may be reduced to the head of *relation*, or some combination of

the noun with a relation. The preposition indicates the relation in which some thing stands with an event or with another thing: as "before," expressing the relation of "all temples" to the "upright and pure heart." The conjunction marks the relation of one event or state of things to another. Thus "and" annexes the present object of desire to that which went before; and "for" connects the knowing with the instructing. The adjective and the adverb are complex. The adjective includes a *quality* and the relation of *possession* or belonging, which is otherwise indicated by the possessive ending, the preposition of, in, or the like. "The upright heart and pure" is the heart of uprightness and purity; and "all temples" are temples in total. It is attached to the noun which it qualifies. The pronominal adjectives and the article stand to the adjective as the pronouns to the noun. The adverb also includes a quality and the relation of *mode*, which is otherwise expressed by the preposition by, in, or the like. Thus "chiefly" means in chief. The adverb modifies the verb, the adjective, and occasionally the noun. The interjection is a mere exclamation of *emotion*, which may be either articulate or inarticulate. When articulate it is usually reducible to some other parts of speech. Here the interjection O goes before the vocative case.

Language in its complete structure is itself, apart from its uses, one of the most splendid achievements of imaginative reason. It comes to us at the very dawn of history in the full bloom of its maturity. No more ethereal vehicle of human thought has ever been known than the tongue of Greece. It is the very flower of the Indo-germanic stock. And no writers in any age have

surpassed Homer, Æschylus, Sophocles, Herodotus, Plato, Aristotle, and Demosthenes, who wrote in that language. These are the princes of heroic verse, dramatic poetry, history, philosophy, and eloquence. So far as we know, this language came forth from the mind of man in its concrete sufficiency, though of course not in its final perfection. The inventors or producers of it were not scientifically conscious of the mode of its structure, or of the elementary articulations of sound of which its words were composed. And during the whole period of its greatest vitality and polish, though the parts of speech had been distinguished, yet the principles of etymology had not been clearly discerned, nor the relation among its cognate tongues discovered. There cannot be a more striking instance of the marvellous efficacy and instinctive promptitude of imaginative reason than the formation by man, in the untutored infancy of his race, of a mode of expression for his thoughts, and of communication between himself and his fellows, which abides the examination of the most cultivated reason, and proves to be to the minutest particular in harmony with the nature of man and the constitution of things. And we are presented, not with one form of speech, but with an indefinite variety of languages, formate and informate, each a splendid achievement in itself. And each of these classes presents its divisions and sub-divisions. The formate languages include the great families of the Hebrew, the Arian, and the Turanian languages. The Arian or Indo-germanic family branches into the Celtic, Gothic, Latin, Greek, and Sanscrit, each of which has been developed independently from an unknown period before the first

records of profane history. Such is the amazing energy, fertility, and flexibility of the plastic or onomatopoetic power of human reason. On the ground of these facts alone there is the highest probability that the origin of language was coeval with the first parents of the human race.

Various means, more or less ingenious and effective, were adopted to symbolise the object of thought to the eye. Natural signs, which are common to man with many of the inferior animals, formed a very imperfect medium of mutual intelligence. The pictures of the Mexicans, the object characters of the Chinese, and the hieroglyphics of the Egyptians were very defective in presenting the object of thought to the eye. At length it was proposed to represent, not things, but the articulate words themselves that represent the things. A people speaking a language of the Syro-Arabian family analysed words into their elementary syllables, each beginning with a consonant, hit upon the splendid invention of a series of characters to stand for these, and was thus enabled to give an adequate representation of the Shemite languages by the marvellously small number of twenty-two signs. The Greeks, in borrowing the syllabarium from the Phœnicians, performed the memorable exploit of farther analysing the syllable into the letters which are its ultimate elements, and then transforming it into an alphabet consisting of separate signs for vowels and consonants to suit the exigencies of their language. This has become the sole alphabet of the Western nations, with some slight variations in the form and number of the characters. A current hand has also been formed from it for the purpose of rapid writing.

Several other alphabets have been invented, probably by imitation, in the regions east of Phœnicia. From these inventions originated the ancient arts of engraving on stone or metal, and of writing on papyrus, parchment, and paper. And hence the modern art of printing, by which the knowledge of letters has made the most gigantic strides. Connected with these are the arts of paper-making, type-founding, book-binding, and pen-making, and the machinery requisite for the hand and steam printing-press. For the wants of the deaf mute the finger alphabet has been devised, and for the blind printing by raised characters that can be felt by the finger has been invented. By these means those who are deprived of both sight and hearing can read for themselves and hold intercourse with their fellows.

II.—SPEECH AS A MORAL POWER.

Apart from the auxiliary activities already enumerated, the power put forth by the tongue is directly and pre-eminently moral, as that exerted by the hand is physical. As the latter deals directly with dumb nature, so the former has to do with man, who alone understands language. Language, as we have already seen, is either spoken or written, and in both departments exercises a mighty influence on man.

The training of the infant mind by the parents is accomplished mainly through language. The mother hopefully speaks to her child, and at length the child learns to imitate the mother tongue; and in that early process there is a vast amount of training. With the words come the things signified by them, the ideas

conceived, and the principles understood and embraced ; and the parental example is a fine realisation of all that is symbolised by the staple of discourse. What the mother suggests the father confirms ; and the child grows up after the model of the parents, except so far as internal disposition or external circumstances modify the result. Training, however, goes on during the period of teaching.

Teaching is also performed mainly through the medium of words. It occupies double the period of training, and consists of an elementary and a finishing course. Elementary teaching is given by the teacher or preceptor in the school. It is chiefly the development of the intellect. The moral and the physical are mostly left, the former to the parent, the latter to the will of the child. Reading, writing, and counting, with the elements of grammar, geography, and history, are the common parts of a school education. To these are added in the higher schools some of the ancient and modern languages, and mathematics, with some of its applications. The final course of education is received from the professor or master in the college, the office, or the field. In the college, classical literature, mathematics, natural philosophy and natural history, logics, metaphysics, and ethics are systematically taught by a staff of professors in arts ; while medical, legal, and theological faculties preside over those who are devoted to these special studies. The school and the college call into requisition a class of men qualified to be teachers in the various branches of a scientific education, and at the same time demand a vast supply of literary apparatus in the way of books, specimens, instruments, libraries,

· museums, and laboratories. The office, the workshop, and the field have each its own ways and means of instruction. In all these language, audible or visible, is the illuminating and regulating talisman that gives unity, concentration, and intelligence to the whole process of education.

After the processes of training, teaching, and finishing have gone on to a common close, those of convincing, persuading, and commanding may be said to commence in high earnest, though they had their elementary period simultaneously with the others. They now deal with men arrived at mature age and possessed of the measure of education and mental development which their condition, internal and external, permitted. Convincing is the special business of the lawyer, persuading of the minister of religion, and commanding of the governor, though they are not confined to these functionaries.

To convince is to demonstrate a given proposition to the satisfaction of an indifferent or even a biassed judgment. It is the part of the logician in general, and in particular of the advocate at the bar, or the debater in the hall of legislation, to convince. Men of intelligence and judgment may be ignorant or misinformed on all subjects which do not of necessity come under their immediate notice. Yet, when informed on the special points of the question, their common sense and experience enable them to give a true verdict or an intelligent vote. And those who are qualified by previous education are on suitable occasions called upon to do what they may by testimony, explanation, or argument to convince others of the truth. It requires a man not only of education, but also of wisdom, fitly to discharge this

great function. Education without experience is in great danger of going astray ; and both are unequal to the great emergencies of human affairs without the guidance of wisdom. Logic is the special art of the convincer ; but it is obvious that he requires to be on the one hand master of the subject of discussion, and on the other hand deeply imbued with the philosophy of the human mind and thoroughly versed in the workings of the heart. He has to adapt himself to men at various stages of cultivation, all of them more or less independent, the mob, the public assembly, the jury, the judge on the bench, the legislator. And men prepared by previous education and habit have often on the spur of the moment given utterance to the most magnificent and overpowering displays of continuous and consecutive reasoning.

To persuade is to induce the will by the force of truth to determine upon a particular course of action. It belongs to the philanthropist, the moralist, and pre-eminently the minister of religion to persuade. Persuasion is to the will as conviction is to the understanding. The one ends in action, the other in knowledge. The highest aim of the faithful monitor is to dissuade from wrong and lead to right conduct. It is a divine philanthropy to bring the spirit that has transgressed against his Maker to a sense of the heinousness of his offence, and thence to a true, open, and penitent reliance on the mercy of his heavenly Father. The ambassador of heaven, the evangelist, and the pastor have a wide field for the discharge of their honourable functions. The individual, the family, the weekly congregation, the public assembly, are all accessible to the minister of

grace. His place of power, however, is the pulpit. There the serious community appear before him once a-week in all silence and sobriety to yield themselves to his persuasive power. What a responsibility is upon him! What a privilege is then voluntarily conferred upon him! No task on earth can for a moment be compared with that of persuading men to be reconciled to God. No scene more sublime than that of the pastor expressing the heart's desires of those who are persuaded, or of the pastor and the flock raising their united song of praise and adoration to the Father of mercies and the God of all comfort. If it were not that man was created in the image of God, it would transcend the highest efforts of human ability in any adequate degree to persuade men of the things of God, to express the desires of prayer, or realise the emotions of praise. Yet all this has been done in some humble measure in the winged words of articulate speech.

To command is to speak the word of authority and power, which is or ought to be followed by obedience. In convincing and persuading we stand on a footing of comparative equality with those whom we address. In commanding, the superior, at least in authority, addresses the inferior. To command is the province of the sovereign, the legislator, the magistrate, the officer, the master, the parent, the Creator of all. The sovereign is the hereditary or elective monarch of the nation constituted by law. This involves the complex machinery of civil government, with its various offices, institutions, and laws. The legislative council assists the sovereign in making, the magistrate in administering, the laws. Hence proceed the codes of law which have been framed

by the civilised nations of the earth, and all the officials that are connected with their enactment, interpretation, application, and execution. The military officers form a body of commanders distinct from the civil functionaries, placed by the edict of the State over those who are to defend its cause and its independence by the sword. The master is a superior of very multifarious functions, entrusted with the education, general or special, of youth for the business of life. He is the master of the school, of the college, of the apprentice in the various branches of trade and commerce; and his duties and responsibilities are in some measure regulated by the customs of his country.

The parent is the natural superior, from whom all the others emanate, as the race in all its compass springs from the primeval family. The parent has, under the Author of nature, a property in the children, and therefore a legitimate authority over them. When the second generation arrives, he becomes the patriarch. When he dies, his sons become the co-equal patriarchs of so many families. If all these are to have a single head, the next natural right is that of the elder brother. Two modes of checking arbitrary power now come into requisition, legislation and election. If the hereditary succession is to be guaranteed to the eldest son of the patriarch, the check on his will is law, enacted by a competent authority, by which he becomes a limited monarch. If the succession is to go by election, regard is professedly had to the wisdom, integrity, and energy which are requisite in a sovereign. This becomes of itself, apart from any other law, a strong restraint on the will of the sovereign elect. But it is obvious that the sagacity of

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mind and energy of character which are needful in a ruler, both qualify and tempt him to be arbitrary in his sway. And hence it is found that even more potent restrictions have to be laid on an elective than on a hereditary sovereign, if he is to be kept from degenerating into a tyrant. There are also two modes of supplying deficiency of mental vigour in the sovereign, the appointment of a council to assist him in the execution of his functions, or the substitution of such a council instead of a single individual to discharge the functions of government. The latter has seldom succeeded for any length of time in securing order and maintaining its authority. It wants the unity of principle and purpose which is necessary for the efficient administration of public affairs. It is obvious from the nature of man that a hereditary monarchy, checked by law, advised by a council of responsible ministers, and supported by a house of legislation, elective as well as hereditary, is the safest and strongest form of human government. It respects the hereditary principle, which is founded upon the natural authority of the father and the elder ; it provides for unity of action ; it is not so rash as the prompting of a single will ; it avoids the turbulence of a national vote ; it guards against the evils of despotism and imbecility by the impartiality of law and the accountability of ministers. It is plain, moreover, that even an elective monarch derives his authority, not wholly or chiefly from the vote of the people, but ultimately from Him who made man capable both of governing and being governed. The nature of man is antecedent to the choice of the people. The latter results from the former ; the former comes immediately from God.

The Creator is, by virtue of His creative act, the absolute Owner of all. He is therefore the supreme and universal Governor. The possibility of error in judgment, malice in intent, or defect in power, alone renders a check or a help necessary to the ruler. Here wisdom, holiness, and power are all unlimited. Hence the supreme government is absolutely perfect. It is obvious that treason against this government is of the most heinous character. The Lord Himself is Judge of all the earth. The executors of His righteous sentence upon transgressors are not men. But when the law of heaven has already had its full scope in pronouncing the doom of the guilty, and holding them over for the penalty imposed by eternal justice, another and a milder office has been assigned to man, that of minister of the Gospel. How transcendent the grandeur and solemnity of this office! How inexpressibly affecting to beseech the children of doom to be reconciled to their Maker before the sentence is carried into effect! We are trenching here upon the province of theology. But it is proper to indicate that the minister of the Word is the bearer of tidings that amazingly enhance the claim of our Creator upon our spontaneous and uniform obedience.

This sketch of the power of language, however, would be far from being adequate if we did not take in the influence of written speech. Literature may be divided into ancient and modern. Ancient literature it is convenient to arrange under religion, law, philosophy, and history. From this arrangement, which is on the whole chronological, we perceive that will occupied the foreground in primeval literature, understanding came into prominence at a later date, and power be-

came conspicuous after the others had been considerably developed.

RELIGION is that principle in the human soul which is called into exercise by the relation in which man stands to his Maker. And it is a notable fact that the oldest remains of written language relate to this question. Homer in Greece and the authors of the Vedas in India and the Sagas in Scandinavia contemplate the ways of God with man, and present before us a world deeply impressed with a sense of the presence and power of the Deity upholding and controlling all things, and regulating and directing by His authoritative behests all the concerns of man. The origin of this all-powerful impression cannot be doubted. To ascribe it to mere intuition, apart from any exercise of the cognitive or ratiocinative powers of the mind, no one will presume who knows that intuition deals directly, not with realities, but with principles. To trace it to the native and as yet undeveloped sagacity of the inexperienced observer of nature, apart from any manifestation of the Divine presence or revelation of His existence, few will be disposed who have regard to the probabilities of the case. It is not to be denied that the eternal power and divinity of the Creator may by a just and simple process of reasoning be inferred from the things that are made, nor that the argument is cumulative and incontrovertible. But it is a question, whether the early powers of the infant race were competent to derive so strong a conviction of the power, justice, and omnipresence of the Creator as the ancients had from His works; without any personal appearance of the Worker or any direct communication from Him; while it is utterly improbable

that He should create man after His likeness and yet not make Himself in any way known to him. We are thus led to the conclusion that the Author of nature had either manifested Himself or made an oral revelation of His existence and nature and will to primeval man. Now any grand or impressive conception once lodged in the mind of man is a seed of life and power which will perpetuate itself from generation to generation. But the idea of a supernatural Being who is the Author of the universe far transcends in importance and interest all other conceptions. Planted in the memory of the first man, it has not failed to exercise an imperishable influence on the intellectual and moral history of the race. This influence discovers itself in the religious tenets of all nations. Divested gradually, however, of its historical connexions, involved in the misconceptions of vanity, and perverted by the deceits of self-interest, it became in general a superstition strangely diversified according to the abilities and exigencies of the tribe and country; mighty indeed to awaken the dark forebodings of conscience, and, with the help of some traces of a primeval intercourse, to urge to some rude endeavours after propitiation, but wholly impotent to impart certainty to the understanding or confidence to the heart. These dark surmisings, however, stand before us in Homer and the other poets, embellished and hence diversified by the imaginative additions of the successive writers, and yet presented with all the confidence of an undoubting faith; while the fundamental principles on which they rest are so congenial with the expectations of man and consistent with the nature of things as to command the universal acquiescence of the unquestioning multitude. Hence

the written mythologies of India, Greece, and Rome held supreme and unrivalled sway in all questions of eternal interest over the minds of the Gentile world from generation to generation until the advent of Christ.

Among the products, however, of the ancient mind, it is impossible to forget or ignore the series of writings collected in the Old and New Testaments. These occupy a conspicuous and altogether peculiar place among the monuments of ancient literature. They appear among a people of primitive habits, occupying a small territory, and little affected by the civilisation of arts or letters. Their composition extends over a period of at least 1,500 years—an interval including the rise, progress, and decline of Indian, Grecian, and even Roman literature. On opening the collection, we find in it a clear and calm history of the origin of man, and of the ways of God with man from the beginning down to the establishment of Christianity. From this record it appears that after the unparalleled event of the fall of man, and before men had altogether ceased to retain the knowledge of the true God as He had made Himself known to the first man, the Lord God thought fit to make a new revelation of His character and will in a written form. This was at first put into the hands of a chosen people, and enlarged by successive additions as occasion required. When it was at length completed, it was published and circulated among the Japhetic as well as the Shemitic races of men, and by their means is now in the course of being distributed among all the nations of the earth. It is but the naked truth that for the last eighteen centuries this book has exercised a paramount and an ever-growing influence on mankind, and that this influence

has been eminently favourable to truth and good. It has extended and elevated civilisation. It has engendered and propagated a pure and unbending morality and a disinterested and energetic benevolence. Wherever it has gone, it has encountered and overturned superstition and idolatry, dispelled erroneous notions concerning the Deity and the invisible world, and emancipated men from the bondage of ignorance and immorality. It has induced many myriads of the human race to fear God, to entertain rational conceptions of His nature, and render to Him a sincere and spiritual worship. It makes communications concerning God which are calculated to awaken gratitude, confidence, repentance, love to God and good-will to men. And it has been accompanied with a light and a fire from heaven which have rendered the human heart susceptible of these feelings.

LAW is the formal expression of moral truth and positive precept. Man is a moral being, imbued from the beginning of his history with the first principles of the knowledge of God. It is natural, therefore, that law should play a prominent part in the affairs of man, and at an early date assume the form of a written code. The precepts of Confucius, the institutions of Manu, the laws of Lycurgus, Solon, and other ancient legislators, have exercised a powerful influence over successive generations of those nations by which they have been adopted. Through the wide predominance of the fourth great monarchy the Roman law has largely modified the judicial systems of modern times. Every nation has now a vast inheritance of law, to which it is making continual accessions. Now law is a system of traditional or

written commands. This form of words regulates the whole arrangements of civil government, of the military establishment, and in some degree of the religious and educational institutions of the country, and controls the conduct of every citizen, from the prince to the peasant, in all the important transactions of civil life.

PHILOSOPHY is the love of wisdom. It presupposes knowledge; for wisdom is the wit or skill to apply the knowledge we possess in the most effectual way for the accomplishment of our ends. It ascertains the causes of certain effects, and then applies them to produce these effects when they fall within the scope of our purpose. Hence it transcends science, while it includes it. When religion and jurisprudence had trained man somewhat to think, the intellectual part of his nature began to display itself in questions concerning the origin and principle of things, and the relations of number and the other kinds of quantity. Pythagoras and his followers, Thales and his successors, busied themselves with these questions. The theory of the mind, the first principles of logic, ethics, physics, and metaphysics, occupied the attention of Socrates, Plato, Aristotle, and their contemporaries and followers. Socrates powerfully stimulated the thinking faculties of his generation. Plato and Aristotle have by their works achieved and maintained an ascendancy over the leading intellects of the heathen world, and have made their influence profoundly felt in the Christian Church. They have handed down to us, in fact, no inconsiderable amount of philosophical truth, and have left some branches of science in a state of advancement to which thinkers of later times have not been able to make any essential addition. They were

surrounded and followed by a galaxy of brilliant minds, and the philosophic spirit which they called forth has furnished the world with an uninterrupted succession of metaphysical writers, who have, no doubt, in some respects wasted their energies, yet in the main have contributed to lift men's minds above the grovelling instincts of a mere animal nature. Philosophical speculation has a peculiar charm for those who are leaders in education, politics, and religion, and therefore contributes largely to mould the opinions and regulate the actions of men.

HISTORY is the record of human affairs. Affairs are the realizations of the principles of religion, morality, and philosophy. They illustrate and enforce these principles by example. They are the proceedings taken, in order to arrive at the various ends contemplated by individuals or bodies of men, and therefore include the struggles for predominance and for principle which have agitated the length and breadth of society. Hence the record of human dealings and strivings is intensely interesting, and acts as a potent spell upon the hearts of men. An incident in the biography of a heroic character has often been a lesson and an impulse for life. The contendings and sufferings of our forefathers for a principle of vital truth, or for liberty of person or of conscience, have animated us to emulate their virtues, and encouraged us in the midst of oppression to hope and strive for deliverance. Example is more impressive than precept. The latter is abstract and naked. The former is concrete, and clothed in all the reality of life. The precept exhibits the principle, as yet isolated and awaiting realization. The example represents the principle

embodied in an act, and therefore not merely as an idea of the understanding or purpose of the will, but as an effect of power. History, therefore, being a record of examples of virtue and of vice, of purpose, of patience, of perseverance, of valour, of devotion, of all praise-worthy and blame-worthy deeds, is fitted to be a powerful incentive to virtue and dissuasive from vice.

It is proper to remark that the book of divine revelation combines all these different forms of moral power. It is a book pre-eminently of religion ; for it treats of the relation of man to his Maker, and inculcates the constant superintendence of a divine providence. It is also a book of law. Its first and fundamental part is called by way of pre-eminence the law. It proclaims the first principles of the moral law, and it enacts a civil code for the State and a full and minute canon for the Church. The subsequent parts of this unique volume cast additional light upon the unalterable principles of rectitude, and, in subordination to these, the variable enactments of a positive law. It is, moreover, a book of wisdom, and therefore of primeval philosophy—not descending to sects or schools, but postulating the great principles of material and mental science, of physical and metaphysical truth, of intellectual and moral philosophy. And lastly, it is a history, emphatically a history, beginning at the very creation of man, and continuing without interruption to notice every event of moment down to the foundation of the Christian Church : the only history that goes back to the origin of man, and accounts for his condition at every point ; and a history not only of the past, but also of the future of man, even to the end of time. This history is therefore pregnant

with the weightiest examples and the most powerful motives that can influence the will of man. And, running through it as a golden thread, and culminating in its closing part, is the peerless example of Him who was holy, harmless, undefiled, and separate from sinners; and who furnished, by His propitiatory death, the only all-prevalent motive to penitence and gratitude. Hence this book is truly a concentration of all that can influence the heart of man to return to God.

From this brief reference to ancient literature, we turn to that which may be called modern. This may be summed up in one word—the Press. The art of printing has revolutionised literature. The facilities for reading, and, at the same time, the multiplication of readers, have increased its influence a thousand-fold. We do not attempt to enumerate, or even classify, the books of theology, law, philosophy, history, biography, science, art, poetry, fiction, which now teem in boundless profusion from the Press. The nursery, the school, the college, the learned professions, the scientific practitioner, and the general reader are abundantly supplied with their appropriate literature. At the same time, the daily or weekly paper penetrates into almost every home, feeds the curiosity of the inmates, and modifies their train of thought during the interval of publication. The fortnightly or the monthly has nearly an equal circulation, and pours into attentive ears its stores of popular information. The quarterly or the annual loads the shelves of a more select class of readers. The circulating libraries facilitate amazingly the dissemination of a cheap literature. The shelves of our public libraries groan under the ponderous tomes of a by-gone literature, and have no room

for the new accessions which are perpetually knocking for admission. Mankind have become largely readers, and the readers exercise a mighty influence over the non-readers. Some seem to hold more converse with the dead or the distant, through their writings, than with the living and the present in their domestic circles. Hence the public mind is largely regulated by the Press. The writers are a multifarious class of all shades of opinion on speculative and moral questions, and of all possible degrees of fitness and unfitness for undertaking the guidance of society.

In such circumstances it might be expected, at first sight, that the result would not be very favourable. But it is to be borne in mind that into the literature of the world, from its very origin, was introduced the book of heavenly wisdom, the volume of revelation, pregnant with the seeds of eternal truth, and proclaiming, moreover, a gospel of redemption and reconciliation from the God of Heaven. This book has made an indelible and overmastering impression on the minds of men : It has penetrated the literature of all Christian countries with the transcendent themes of revelation : it has called into existence an order of educated men to elucidate and enforce its doctrines, and to proclaim and commend its gospel one day in every seven to the whole community : it has interwoven society, not only with the decencies and courtesies of civilization, but with the friendships and charities of a genuine benevolence. And hence, notwithstanding the farrago of crude and undigested notions, the wild and incoherent leaven of sects and parties in religion, politics, and philosophy, there is still intermingled with all this a vital principle of indestructible and

unconquerable truth at work in the Press, which makes its prevalent influence on the whole salutary to society, and favourable to freedom of thought and morality of life.

III.—POETRY AND MUSIC.

I. POETRY, in point of form, is, simply measured speech. The unit of measure is the foot. A certain number of feet constitute a line. Rhyme is the agreement of two parallel lines in the sound of the last syllable or dissyllable. This is either continued through the whole piece according to a certain law, or it is wholly omitted. It enhances the charm of certain forms of poetry ; but it has rather an enfeebling effect in the epic or philosophic poem. In this respect poetry is regulated by the laws of prosody.

Poetry, in point of matter, is the measured language of emotion. Every object of thought is accompanied with more or less of emotion, which may have its appropriate poetic vehicle when it meets with a befitting bard. Religion, patriotism, home, friendship, love, bravery, victory, the tragic or comic drama of life, the beauties of nature, and even the theory of the universe, have all found expression in measured speech. The first emotion that called forth the poetic fire was that of religion. The things of God, the ways of God with man, are the sublimest and most solemnising themes that can engage the mind of man. The loftiest forms of poetry are required to give utterance to these high things. Accordingly we find that Homer and the great tragedians, Æschylus, Sophocles, and Euripides, behold the gods mingling in the throng, and taking an active, if not

always a harmonious, part in the affairs of men. Along with the great poems of the early world there was a perpetual succession of hymns dedicated to the worship of God. These have continued to express the devotional feelings of all generations, and to fan the flame of holy enthusiasm in the breasts of their descendants. The book of Psalms, which owes its origin mainly to David, has animated the faith and hope and gratitude of the whole Jewish and Christian Church.

The love of country has also caught hold of song, and found in it a mighty instrument for perpetuating its influence. The patriotic ode binds citizen to citizen and peasant to prince, and contributes in no small measure to the stability of the Throne and the safety of the State. The peaceful joys and affections of the home, the ties of friendship, the modesty of chaste love, have often been the theme of worthy verse. The brave deed, the glorious victory, have often received the tribute of the muse. The drama of life is a combination of all the cheerful and plaintive, depressing and high-strung emotions, which mingle in the chequered web of human experience. The beauties of nature have their Wordsworths ; and even the theory of all things has had its Lucretius. All these lofty themes have ennobled the peculiar language of emotion. It must be acknowledged, however, that it has sometimes been debased by being made the vehicle of superstition, lust, and excess.

The becoming helpmate of poetry is music, which never attains the height of its perfection until it is married to immortal verse. The song, sacred, patriotic, or social, has a three-fold hold on the common mind. It is the language of emotion, the mainspring of all

voluntary action. It is accompanied with music, the warbling of conscious feeling. It is the appropriate language of memory. The song sung to the enraptured ear makes its indelible impression. Let the songs, then, of our kindred, our countrymen, our whole race, be expressive of the holy, the pure, the good, the sublime, the beautiful, that the powerful sway which they hold over their minds may always aid to elevate, strengthen, and refine the tendencies and dispositions of the heart.

II. MUSIC is the daughter of song. As the emotion gives birth to the poetic utterance, so the latter calls into existence the melodious warbling. And this again gives rise to the musical instrument, by which it can be rendered apart from the human voice. Although the song affords the only reason for the origin of music, yet the latter, when once originated, comes at length to be separated from the poetic effusion and developed as an independent art.

Music is the melody of sound. It embraces, of course, harmony of notes in the melody. The tune sprang forth, no doubt, in a perfect form from a heart surcharged with emotion, as speech from a head big with a thought panting for utterance. It was the afterwork of reflection to analyse the melody into the seven notes of the diatonic scale. But after the tune was sung, the first effort of ingenuity was the invention and construction of musical instruments. Of these the harp and the pipe are the primitive types of the string and the wind instruments, which have now culminated in the piano-forte and the organ. Collateral with the harp are all the kinds of viol or violin which are played with a bow; and intermediate between the harp and the pipe is the

harmonium, which is played by blowing on thin plates of spring metal. The device of written speech was followed by the invention of a musical notation, which has grown from the rudimentary form to the present complicated and multiform system. It is easy to imagine what a vast amount of mechanical effort is put forth by the makers of the various kinds of musical instruments, and by the various performers of instrumental music. The human voice is seldom employed to give the modulations of music apart from articulate speech. Whistling is the formation of notes, not by the larynx, but by the lips.

Music, however, we now consider as an effort of moral power. It is the modulated utterance of emotion, and therefore of emotion not frightened from its propriety, but self-possessed and pouring itself forth in a melody of sound that touches the same chords of emotion in the heart of the hearer. The violin, being the most perfect instrument, is most capable of giving exquisite expression to the delicate shades of emotion, whether the plaintive, the tender, or the joyous. Music does not naturally express the fierce or malignant passions, as they are incongruous with reason and self-command, and therefore unfit to be represented by a modulated system of sounds. Such feelings burst forth in the inarticulate cry, the scream, the snarl, the yell, the hiss, the whoop, the growl, and the like. Other instruments have an aptitude to express each its own character of emotion, from the happy carelessness of him who whistles as he goes for want of thought, to the intense anguish or enthusiasm of him who suffers or struggles in the battle of life. The gay and the brave moods of mind find

their more vehement or muscular expression in the dance, which is the spontaneous outburst of exuberant health, of merriment, of patriotism, and sometimes of religious enthusiasm. It is a rhythmical movement, regulated by music, and capable on the one hand of great grace and refinement, or on the other hand of much rudeness and indecency. As the emotions are the great springs from which all voluntary action flows, it is obvious that music, which expresses or excites these, cannot but exercise an immense influence on mankind, especially on the more susceptible portion of society. It was accordingly coeval with the home. All nations have their characteristic melodies and favourite instruments; and all persons are more or less deeply affected with the ardour or the pathos which music is fitted to express or inspire.

CHAPTER IV.

PRACTICAL METHOD.

This is the mode of applying acquired and methodised knowledge to the affairs of life. Here observation retires and imagination comes into the foreground. It is a grave mistake to suppose the imagination, even in its wildest moods, to be beyond the guidance of reason. Imagination, in fact, is simply reason itself conceiving the situation and shaping the course accordingly on some principle of intelligence. Hence there is method in every process of imagination. It is equally, if not still more, unwarrantable to suppose that the exercise of imagination is in itself blameworthy. In a pure mind the product of this faculty, however luxuriant,

will be perfectly pure both in matter and motive. To deprive an intelligent being of the expatiations of fancy would be to take away, not only a pre-requisite of all intelligent conduct, but a prime source of the most refined and most innocent enjoyments. A plan of a garden, a park, a building, a world, a universe, is a work of imagination. Can this be wrong? A discourse, a poem, a history, a science, is in its structure a work of imagination. This is not wrong. In like manner a parable, a fable, a fiction, is the product of the fancy. Is it wrong? That depends on two conditions. Is it given forth as a fancy sketch and no more? Is the matter of it blameless? If the answer to either of these questions be negative, it is morally wrong; but if both be answered in the affirmative, it cannot be condemned. If in the latter case the matter be positively good, and the intention be to please, to cheer, to call forth hope, to convey instruction, to cultivate the moral feeling, it must be pronounced worthy of praise. Hence a fiction is in reality an equivocal term, and not necessarily of evil import. If it be put upon us for a fact, it must be denounced as a serious offence. If it be avowed or intended to be ideal, then it may be good, bad, or indifferent, according to the matter or scope. It follows from these considerations that we are at liberty to exercise our imagination, but at the same time accountable for the use we make of it. It is to be remembered also, that falsehood is a crime that can only be committed by the abuse of the imagination. To deceive our neighbour by passing a fiction for a fact, or posterity by imposing on them fable for history, is a violation of the first principles of morality.

The free use of the imagination, however, is not only a right, but a necessity of our nature. We could not utter a word, understand a sentence, form a purpose, or pursue a course, without the unfettered exercise of the imagination. We could not perceive, remember, judge, or reason, much less construct, without the spontaneous play of the imaginative reason. It is vain, then, to talk of chaining the imagination, or to suppose that there could be a mind at all without the free play of this versatile power. Without it reason would be at a stand still, science would cease, art would fail, and human progress would become impossible.

The effort of imagination is either prompt or deliberate. Every waking moment of a man's life is an emergence, and calls for an instant effort of the imagination. This takes the form of a purpose, which has to be immediately put in execution. This purpose is an extemporaneous method, and usually comes up at the bidding of the will with the utmost promptitude. It is a sort of concentrated result of the experience and wisdom attained up to that time. But there are occasions when hesitancy appears, and a pause of more or less duration takes place before the purpose can be formed. This happens when the circumstances are new and strange, when they are not even analogous to anything heretofore experienced, when the motives are conflicting, and the result dark and uncertain. The case may be so embarrassing that the clearest intellect may falter. But in far less dubious circumstances the man of weak or slow resolution may lose his presence of mind. There will be little method in his purpose, and he will be liable to take a wrong step. In nothing is the calm and clear thinker more

conspicuous than in meeting these sudden emergencies. Self-possession enables him to take a steady and correct view of things, and so to form a purpose suitable to the occasion.

We proceed next to the more deliberate efforts of imagination. These, though unities in themselves, are not so capable of being reduced to a grand unity as the universe of things; yet they are portions of that great unity of the conceivable, which might proceed from the imaginative reason of man, and therefore capable of methodical arrangement. Every process of imagination is a plan, and every plan has a principle, which, however diverse from expectation, yet, on becoming known, justifies or at least explains it to the reason of the examiner. Efforts of imagination may be classified under the heads of plans, hypotheses, inventions, works, arts, and all their varied products.

A *plan* is a scheme in accordance with which an intended piece of work is to be executed. It presupposes an end to be attained; and the mind casts about to discover the means by which it may be effected. All the past experience and all the acquired wisdom of the agent are now required to bring together and arrange the means that are available. The methodical mind here shows its superiority. Memory, wisdom, and readiness serve to make methodised knowledge available for a plan that is within our resources.

A *hypothesis* is a supposition, having some shade of probability, proposed to account for a certain state of things, the real cause of which is matter of enquiry. As a tentative conjecture it should be drawn from some of the circumstances of the case in hand, from the analogy

it bears to other cases, or from the mere force of imagination itself, and it should be at least seemingly adequate to account for the given state of things. Having been once propounded, it gives rise to a plan or series of measures for ascertaining whether it really be the fact of which we are in quest. If the result of our investigation be that the hypothesis is the required fact, we have made a discovery. If it turn out to be a fact, but not that required, or not to be a fact at all, it has so far aided discovery as to narrow the field in which we are to look for the fact in question. Thus the Ptolemaic system gave way to the Copernican, which is simpler. This was amended by Kepler's laws, which were the result of observation. At length Newton demonstrated the laws of Kepler and that system of the sun and his planets, which has now the rank, not of a hypothesis, but of an established fact. If we can limit the number of hypotheses possible in the case, we may, by a process of exhaustion, at length detect the fact we need, if it be within reach of discovery. It may happen, however, that the hypothesis can neither be proved nor disproved, in which case we must await farther light from some new quarter.

An *invention* is a device for effecting some purpose which either philosophy suggests, pleasure prompts, duty demands, or some inconvenience forces us to form. The inconvenience here spoken of is the necessity which is commonly called the mother of invention. Imagination has a fine, free, and wide scope here. Invention differs from discovery as the means from the end. Discovery of truth, however, is only one of the ends at which invention aims. A list, history, or systematic

arrangement of inventions would fill many pages or volumes. The rationale of the case in hand is the point from which imagination starts on the path of invention. The end in view is the goal to which it tends. The invention is the means to the end. A clear conception of the beginning and the end is indispensable. Force of imagination alone can do the rest.

A *work* of imagination is a literary production, prompted by the motive of imaginative activity, combined with the desire to amuse, refine, instruct, purify, or exalt, and sometimes it must be admitted, to attain an unworthy end. Reason, intellectual and moral, here concurs with imagination in originating works which fascinate the mind and give a powerful stimulus to the emotional part of our nature. They are in general composed of the more highly-wrought eventualities in human story, and so far give a one-sided view of life, and occasion disappointment to those who suppose them to be true to the sober realities of ordinary experience. But when offered and taken for nothing more than the fancy sketches which they really are, well conceived and intended tales have their value as a means of training, soothing, entertaining, softening, and ennobling the occasional reader. If, however, they absorb the attention, they are attended with two serious evils. They foster impatience with the realities of every-day life, a romantic turn of mind, a fond expectation of success in life without the requisite habits of punctuality, industry, and economy. And next, they stir the benevolent and other moral affections without affording the occasions for their practical effect. By thus severing duty from practice they cherish a frivolous, sentimental, barren, and cen-

sorious spirit. In this respect, it must be confessed, they resemble sermons affecting the conscience but not the conduct. The qualifications for undertaking such works with success are, a heart animated with love to God and man, a lively imagination, a keen insight into the nature of man, and a thorough acquaintance with the habits of society. It is one of the advantages of the present day that so many products of the imagination have a good tendency. But there is in such works the possibility of great abuse. The amusement, when alone, is in some cases trivial, gross, degrading, and corrupting. And when, in addition to this, wrong principles are introduced, the evil tendency is proportionally strengthened. Such works, having an enfeebling and demoralising tendency, are to be condemned and avoided, and ought to be discountenanced by the leaders of society.

Poetry adds the charms of rhythm to the fair forms conjured up by a fertile imagination.

Arts are sciences turned to practical account by inventive genius. They bear the same relation to sciences as wisdom to knowledge or practice to theory. An art is the mode of employing an invention or system of inventions for the performance of a certain work. It is itself in the first instance an invention, but afterwards an art to the inventor when he puts it in practice, and to all others who have derived a knowledge of it from him. Hence arts owe their invention usually to men who have had their wits sharpened by practice. The arts may be classified under the heads of understanding, will, and power. They are so manifold and familiar that it is needless to attempt an enumeration. To the understanding especially belong the art of speaking, and all

its collateral arts. To the will may be allotted education and the fine arts, with the schools, academies, and colleges they involve. Under the head of power are to be arranged the innumerable host of arts, beginning with agriculture, which exercise the hand and refer to matter and force.

Speech is the art of expressing by signs the objects of the mind. When these signs become conventional, that is, mutually understood and agreed upon by two parties to apply to the same things, then a medium of communication is established between them, and the whole scene conceived and conveyed in signs by one mind is called up in the mind of one who perfectly understands his words. As man is a rational and social being, speech is a necessity of his nature, and springs spontaneously from his fertile imagination. Speech continued until the topic before the mind has been presented at full length is called discourse, and, if written, a piece of composition. This involves the arts of grammar, logic, and rhetoric. Grammar refers to the structure and order of the sentence; logic to the sequence of the argument and the method of the discourse; rhetoric to the grace of expression, which is in keeping with the beauty of truth. Grammar seeks merely to communicate, logic to convince, rhetoric to persuade.

Education is the drawing forth, in due order and proportion, of the diversified powers of mind and body that are latent in the new-born infant, into the prominence and efficiency which they ought to exhibit in full-grown manhood. Pre-eminent among these powers are those of conscience and taste, which fit the mind for its higher relations with God and man. The process of education

is begun in the home, carried on in the school, and completed in the college or place of initiation into the business of life. Allowing seven years at home, seven at school, and seven in the place of final training, we find the youth at twenty-one years of age prepared to enter upon the tasks of life with the bright hope of perpetual progress.

Tillage and mining are occupied in providing the raw materials which demand so many other arts for their manufacture, transport, and exchange. The highest branches and applications of mathematics, as arithmetic, trigonometry, fluxions, mechanics, astronomy, geology, and navigation, are required for the theory and practice of these valuable and manifold arts.

The products of all these arts are so many distinct specimens of practical method. These are amazingly abundant. There are said to be about five great families of languages, including at least a hundred distinct tongues and five or six hundred dialects, spoken by the human race. This imports a vast wealth of imagination. Within the one speech we find a boundless productiveness of the constructive faculty. When we come to discourse, the sermon, the lecture, the speech on the platform, at the bar, and in the senate, are familiar specimens of practical method, admitting of all possible varieties of matter, form, and quality. When we proceed to written composition, the multiplicity is so great that we must resort to classification. A written production has for its matter either the real or the ideal. The writer finds the materials provided beforehand in the reality of things, or draws them out of his own prolific resources. The result is in the one case an elaboration,

in the other a production. Science and history come under the former head, since every scientific or historical work, as a piece of composition, is the fruit of the constructive reason. Under the latter head come treatises on law and arts, books of fiction, and the effusions of the poet. The term poet, the maker, might have been applied to the author of any of these creations of mental power, most of which, indeed, were originally expressed in verse. It is wonderful to contemplate the prodigious exuberance and versatility of human genius and industry in each of these six departments—history, science, law, arts, fiction, and poetry. The products of education are the works which have been composed for all departments of that process. These include treatises not only on material and mental science, but also on ethical and theological. Other products of the educational movement are the schools, academies, colleges, and churches which have been erected for this purpose. The products of the material arts are to be found in our warerooms, our workshops, our mills, our arsenals, and our dockyards. They come before us in our very fields, gardens, and homes. The war-ship, the locomotive, the steam-boat, the electric telegraph, are among the trophies of a host of arts. All these products are in themselves conspicuous examples of practical method.

From the activities of man it is natural for the philosophic mind to rise to the activities which are at work in the great scheme of the universe. The great problem of our men of science is to determine the potential principle from which the whole system of nature, or any given portion of it, may be developed, or, in other words, to reduce all things to the one thing in

which the potence of them all lies. This is a question of practical method. Its solution depends on two principles, which are indeed one at bottom : first, that the cause or causal thing be not lower than the effect ; and, second, that the cause be adequate to the whole effect. It is self-evident that a lesser potence cannot of itself produce a greater ; and hence the potence in the effect cannot rise above the potence in the agent. It is equally self-evident that all the potences in the effect must have corresponding causative potences in the causal being. Hence it follows that a variety of potences in a complex effect, such as the world, cannot proceed from an absolutely simple principle of activity. It must proceed from a single potentate, as it is a unity. But the potence in that individual must be so diversified in its essence as to produce all the diversity which is in the effect. Now the diversity of effect in the world of reality is of the widest possible extent, as it includes such diverse things as matter and mind. But a material potence is able to produce only a certain definite effect, not higher than matter itself. And hence the one thing of potence that is to account for a world of mind and matter must be a Spirit, all-wise, all-free, and almighty. From this source may proceed a universe more complex than we are able to comprehend.

A familiar instance of the question of development in the present day is the origin of man. To trace him to the ape is simply to suppose either that the less can produce the greater, which we have seen to be impossible, or that the ape has more in it than appears at first sight, or indeed at any sight. There is no ground whatever for the latter any more than the former sup-

position, inasmuch as all experience has failed to find anything in this creature beyond the capacities of an ape. Now, it must be laid down as an incontrovertible principle, that the stream does not rise above the fountain, water above its level, nor the effect above its cause. If there were a cause of dependence, descent, or development here, it must be the reverse: the man must give rise to the monkey. But the rule applies here as well as there. Man has undoubtedly higher qualities than the ape; but at the same time the ape has lower qualities which the man does not possess. And it is, moreover, plain that man can neither generate nor create the ape. This is therefore not the path in which development proceeds.

The more general question is mooted in the theory of development, which is proposed to account for the existing world. This, however, to be valid, must be regulated by the same fundamental principle, namely, that the source, spring, fountain, cause, or whatever else you please to call it, must be potential of the effect, of the whole effect, and of all that may come of it. There has never been, and there cannot be, an instance of the less *alone* producing the greater. Whenever an effect is greater than its apparent cause, we must simply infer that the cause appearing is not the whole or the ultimate cause of the effect in question. The principle of development is fair and agreeable both to reason and nature. Finding that reason traces instances to a principle, diversity to unity, and effect to cause, and finding that in nature the individuals of a species are traceable to a single pair, that a certain set of facts are reducible to a single law, and several laws to a more general law,

until we arrive at an ultimate principle, and that all the parts of the visible universe are bound together into one system of things, we come to the unavoidable conviction that all things are reducible to a single potential principle ; and the being to whom that principle belongs is the fundamental source from which they are all developed. It is sometimes presumed that this principle must be simple. The being to whom it belongs must no doubt be an individual, a single, indivisible being. But the potential principle itself must have such versatility or plurality as will account for all the things developed from it. The process of intuition is this : the thing observed implies existence, the effect the cause, the cause the potentate from whom it proceeds.

At this point practical method for us verges into theoretical method. We are not the makers, but only the contemplators of the world. We cannot part from practical method, however, without calling attention to its bearing on the meaning of power. It indicates that power, both in man and in the Creator of man, implies reason and will, as will itself implies reason. Hence a treatise on the mind of man has a cumulative character. The will involves the understanding ; and hence the estimating faculty especially in the department of conscience opens up new fields for the exercise of the understanding, and the purpose which is formed under the impulse of the will is due to the same source. The power involves both the will and the understanding ; and hence the universe of God and the works of man alike display the intelligence and the freedom as well as the power of a spiritual principle concurring and co-operating in the practical method which they unfold.

NOTES.

1.—MATTER.

Substantia extensa ; substantia corporea. Nempe extensio in longum, latum et profundum substantiæ corporeæ naturam constituit.—Descartes, Princ. I. 53. And so Bain, Comp. p. 1: "The department of the object, or object world, is exactly circumscribed by one property, extension." It is strange that so profound a thinker as Descartes should have made that which is manifestly a mere relation, and not a real property, to be the essential difference of a real thing. "The phenomena of the material world are subjected to immutable laws, are produced and reproduced in the same invariable succession, and manifest only the blind force of a mechanical necessity."—Hamilton, Metaph. I. 28. We have here, at least implicitly, law, need, and force. Reid calls matter the subject of sensible qualities. He also defines body to be that which is extended, solid, moveable, divisible. Essay I., p. 14. If "solid" imply a force of resistance, this is the only real property in the list. But matter is a more general term than body.

2.—A SEAT OF FORCE.

Faraday accords with Boscovich in regarding the atoms or ultimate elements of matter as mere centres of force, without any rigid nuclei, to which the forces adhere. He expresses himself thus: "You are aware of the speculation which I some time since uttered respecting that view of the nature of matter which considers its ultimate atoms as centres of force, and not as so many little bodies surrounded by forces, the bodies being considered in the abstract as independent of the forces and capable of existing without them."—Researches in Chemistry and Physics, p. 367. This view, though quaintly expressed, is doubtless correct. The imaginary bodies, to be bodies at all, must have a set of qualities by which they may

make themselves known. But they have no qualities other than the forces which they display, and are therefore nothing more than seats of force. Faraday speaks of lines of force. These indicate merely the direction or path of the force. In the case of converging and diverging forces, we should speak of the range rather than the line of force.

3.—CORRELATION OF FORCE.

If force in one element did not meet with answering capacity in another, neither force nor capacity could be known, and there could be no concatenation of things, no mechanical movement, nor chemical change. But let it be remembered that correlation is not convertibility. We have abundant proof that one force affects another, and that almost all forces beget motion, unless they be in equilibrium. Motion may also bring force into action by bringing force and capacity into working distance. But the force that causes a motion which brings another force into action is not therefore convertible into that force. The latter was in existence at the same time with the former, and is only called into activity by the approach of the object liable to be affected by it. To talk therefore of the convertibility of force is only to breed confusion, not to give information. Using force in the wide sense of quality, we distinguish the different kinds of matter only by the distinct and inconvertible forces which they possess. To convert one force into another would be a step in the discovery of the philosopher's stone.

The conservation or constancy of force is a fact generally accepted by philosophers. It is distinctly opposed to the convertibility of forces. Faraday starts a difficulty regarding the constancy of force from the law that a radiant force is said to vary inversely as the square of the distance. The difficulty, however, arises solely from the somewhat inaccurate mode of expression, and not from the state of the fact. The whole force is constant in amount at any distance to which it reaches, being diffused over the whole surface of a sphere having the same centre. But at ten miles it is spread over a hundred times the space it covers at the distance of one mile from the centre of radiance. And hence its intensity at one mile must be a hundred times that which it has at ten

miles. The law is therefore in itself the proof of the constancy of the force. But it might be more exactly expressed thus : the intensity of a radiant force varies inversely as the square of the distance from the centre of radiant force.

4.—LIGHT.

This is not the place to discuss the theory of light. The emission theory has been generally abandoned. The undulatory theory lies under the heavy, if not crushing burden of the assumption of an ether. Faraday held, or at all events was on the verge of holding, that light is a force radiating from a centre, and suffering reflection and refraction on coming into contact with new surfaces. This may be called the dynamic theory of light. It is by far the greatest discovery, or at all events conception, of that great chemist. The determination of light as a radiating force ranks with the discovery of gravity as an attractive force. See *Thoughts on Ray Vibrations in the Researches in Ch. and Ph.* The same law will apply to colorific and actinic radiation.

5.—CONTACT.

The nature of force penetrates to the very root of material things. Actual contact appears to be only of force with force. This seems to be proved by the compressibility of matter. This is evidently a crucial point with regard to force. If it be once admitted that contact is only of force with force, it follows that there is an interval between one centre of force and another ; and hence a force acts at a distance, however infinitesimal from its seat. Gravity acts at any distance, however great, varying in strength inversely as the square of the distance. And light appears to be a force of similar boundlessness of range. This action through an interval, some may say, is inconceivable. Perhaps it is, on the hypothesis that there is no God. But it becomes quite conceivable on the postulate of a Creator. Gravity is a fact which requires a Creator for its explication. The same is true of all interaction or co-active force. The only difference is in the distance at which it acts. We speak here not only of simple atoms of matter, but also of the complex molecules resulting from chemical combination. Whether the internal

connexion between the particles of these molecules be actual coincidence or mere contact may be a question with some. But in chemical change it is evident that the force, which rends one or more elements from a given molecule, must belong to an external body, between which and the molecule affected, therefore, a certain distance must have intervened. This opens up to us the real nature of matter. It is a locus of force.

6.—THE RANGE OF FORCE.

Faraday refers to the well-known remark of Newton, in his third letter to Bentley: "That gravity should be innate, inherent, and essential to matter, so that one body may act upon another at a distance, through a *vacuum*, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity that I believe no man, who has in philosophical matters a competent faculty of thinking, can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws; but whether this agent be material or immaterial I have left to the consideration of my readers." With this statement Faraday either coincides or is very greatly embarrassed. Yet he avows the fact in many places that a force has a certain range in the space around its seat, so that it encounters another force, either to draw it into the same centre in the case of chemical affinity, or to repel the one centre from the other in the case of repulsion. If it is possible for a force to range over any distance, however small, there can be no impossibility in a force ranging over any distance, however great. The compressibility of matter within certain limits proves the short range, and this determines the possibility of the long range. Gravity and light are the grand examples of the boundless range.

The idea that the essence of matter was force in a broad sense was not familiar to men's minds in Newton's time. His great difficulty, however, seems to have been action through a vacuum; and hence arose the hypothesis of an ether. But if force has a certain range, the interval at which action may take place is not a pure vacuum; it is bridged over by the range of the force. Hence the ether is unnecessary. For it must be supposed to consist of atoms

having a highly elastic force with a peculiarly long range. Now if this range were the millionth part of the distance between the sun and the earth, we may conceive it to be the thousandth, or the tenth part, or the whole of this distance. Hence there is nothing inconceivable in light being a force acting from a centre with an unlimited range. Besides, if the ether is to mediate the action of gravity as well as light, it seems to be a thing impossible, as its particles would be exerting *at the same time* an attractive and a repulsive force.

The laws of light in regard to direction are mechanical in their nature. Now a ball rolling under an initial force over a smooth horizontal surface, on striking a smooth plane vertical to the plane of its motion, would come to a dead pause if the line of its motion were perpendicular to the vertical plane, and would run along its surface with a velocity due to the initial force in that direction if the line of its motion were oblique, on condition that the colliding surfaces were strictly rigid. But if the ball were elastic, it would rebound with precisely the same force with which it had resisted absolute contact with the vertical plane, and the initial force in the direction of the vertical plane would still be the same. Hence, as the resolved force and the resultant force would be equal, while the direction of the one component would be the same and that of the other reversed, it is manifest that the angle of reflection would be equal to the angle of incidence. This law of reflection is due, not to anything in the ball, but to the repulsive force with which it resists contact with another solid. It is not affected by the mass of the ball, nor by the range of the force; and hence we may leave out the element of quantity, and suppose the centre of force at any distance from the point of incidence. Thus, if light be a radiant force, we seem to arrive inevitably at the law that the angle of reflection is equal to the angle of incidence. The same line of argument will conduct us to the law of refraction, when a force in its range penetrates from one transparent medium into another of a different density. The velocity of light does not appear to be at variance with this theory; for light is not a constant efflux from matter, but only flashes forth into space when combustion breaks forth into a flame and no opaque body is in the way. It is quite natural, therefore, that such a force should take time to penetrate to

its full compass in space, though there should be no current, but merely a static condition afterwards.

7.—CHEMICAL AFFINITY.

When two monads, say of oxygen and hydrogen, combine into one molecule, the probability is that they are concentric, and that the forces of the chemical compound are the resultant of their several forces. Their chemical affinity for one another is satisfied by their union. The molecules of water, for example, may take the state of gas or vapour by a sufficient degree of heat, and this is the state of its components at a much lower temperature. But to deduce the other properties of water from those of oxygen and hydrogen involves an analysis to which we have not yet attained.

8.—THE LIVING PRINCIPLE.

Professor Huxley makes the following statements :—"The final object of physiology is to deduce the facts of morphology, on the one hand, and those of distribution on the other, from the laws of the molecular forces of matter."—Lay Sermons, p. 107. Chemistry has not yet succeeded in deducing the facts of a chemical compound, say water, from the laws of the molecular forces of matter, which is a much simpler problem. To deduce the facts of morphology from these laws *alone* we hold to be logically impossible. You cannot infer in the conclusion what is not contained in the premises. The laws of molecular force *alone* cannot produce laws that are essentially different. It is, moreover, an unusual stretch of *a priori* reasoning to deduce facts from laws.

He also says that "Carbon, hydrogen, oxygen, and nitrogen are all lifeless bodies. Of these carbon and oxygen unite in certain proportions and under certain conditions to give rise to carbonic acid; hydrogen and oxygen produce water; nitrogen and hydrogen give rise to ammonia. These new compounds, like the elementary bodies of which they are composed, are lifeless. But when they are brought together under certain conditions, they give rise to the still more complex body, protoplasm; and this protoplasm exhibits the phenomena of life."—P. 149. "If the properties of water may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground

for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules."—P. 151.

This able naturalist and sparkling writer cannot mean to put this forward as anything more than a vague and distant analogy. But analogy at best is not identity, nor even unity. It may point to the unity of things, but it really points away from the identity of kind. A multitude of facts go to prove the unity of things; but they are all against the identification of kind, whether of qualities or things. Accordingly, when an analogy is traced between the formation of water and of protoplasm, it is frankly accepted as part of the cumulative argument for the unity of nature. But the slightness of the resemblance yields at once to the importance of the differences which prove a diversity of kind. In the case before us the vital potence is in every important respect different from any material force. 1. The qualities of life, assimilation, organization, growth, propagation, sensation, instinct, and self-movement, do not belong to mere matter in any of its forms, simple or compound. This is a radical difference. 2. The origin of protoplasm is different from that of water. Water arises from purely material elements, oxygen and hydrogen, by a purely material medium, the electric spark. Protoplasm arises from purely material compounds, water, carbonic acid, and ammonia, but only by the medium of a living body. The presence of lightning occasions the formation of water; the presence of life is necessary to the formation of protoplasm. Whence, then, came the first living body? Certainly not from matter by any process yet known. And spontaneous generation has not yet been proved. This is meanwhile an essential difference. 3. Water is a stable substance, that remains water until some more potent chemical agent rends asunder its constituent elements. But protoplasm is far from being stable in its ordinary conditions. While life remains the body is continually secreting and excreting; and when life departs, the body is decomposed into its original elements. If you draw water from a fountain, it remains water still; but if you cut off a leg of protoplasm, it loses not only the potences of life, but even the organic structure. The living body resists the chemical agencies that are ready to attack it; the dead body succumbs to these agencies. This is surely a very important difference. 4. Water is

homogeneous ; protoplasm in living organisms is amazingly heterogeneous. By every known law that which is composed of the same materials in the same proportions exhibits the same phenomena. Yet protoplasm in the living subject exhibits a vast variety of shapes, properties, and habits. This difference is traceable only to the diversity of the vital potency that is at work in the different kinds of plant and animal. This is plainly a fundamental difference. 5. From all this it is abundantly evident that life is not a property of protoplasm. That which draws the materials out of the mineral world, arranges them into an organic body, and propagates other living bodies of the same kind, is evidently not the property, but the proprietor of the body ; and the distinctive qualities that display themselves in the living body are the marks, not of protoplasm, but of the animating principle which has given it constitution. One palpable proof of this is the fact that, by the professor's own showing, protoplasm remains in the body when life is extinct, or in the egg when it wants the living germ. Now life cannot be a property of that which may exist without it. Wanting the living germ, however, protoplasm ceases to exhibit the vital qualities, and becomes subject to the ordinary material influences. The galvanic battery may excite a momentary muscular contraction ; but it has no power to restore life or even preserve the organic form. The differences that have been noted are abundantly sufficient to establish a generic difference between the vital principle and the material atom. The circumstance that the living monad has actual and intimate relations with certain kinds of matter only proves the unity amidst the diversity of things.

9.—THE PHYSICAL POTENCES.

The word physical is sometimes used in a wide sense as the counterpart of ethical. It is here employed, however, in a narrower sense to denote that which grows, from *φύσις*, growth, nature, and therefore to include the organic and exclude the inorganic.

10.—MIND.

Substantia cogitans, Descartes. "That which thinks, reasons, wills."—Reid, Es. I. 1. "The subject of the various

[illegible]

twofold division of Reid. To make way for Reid's power and Hamilton's voluntary motion and conation, then, we must introduce power. And, on consideration, it will be evident that power is as distinct from will as will is from understanding, and that it is at the same time co-ordinate with both. Bain's division into Feeling, Will, and Intellect is no improvement upon Hamilton's.

12.—MATTER CANNOT ORIGINATE.

Many of the ancients supposed matter to be eternal. But this arose mainly from an inadequate notion of its real nature.

13.—POWER.

Power, as here defined, though not regarded by the philosophers a primary faculty of mind, was yet not unknown nor unnoticed by them. Locke, though professedly treating only of the understanding, has an interesting chapter on power, in which he makes the following statement, B. II., ch. xxxi., § 4 :—"The idea of the beginning of motion we have only from reflection on what passes in ourselves, when we find by experience that barely by willing it, barely by a thought of the mind, we can move the parts of our bodies which were before at rest." This is precisely our power, and it is connected by the author with will and freedom, though he does not bring out the distinction we make between it and force. Reid has an essay on what he calls active power, in which there is a chapter on the question, "Whether beings that have no will nor understanding may have active power?" which is answered hesitatingly in the negative. This arises from his using power in a wide sense, so as to include the forces which are the efficient causes of the phenomena of nature. Hamilton takes notice of power merely to correct Reid for his objection to the phrase, "passive power."—*Metaph. I.*, p. 174. But though philosophers have used the phrase intelligibly and for convenience, yet the structure of language is generally with Reid. In the sentences, "He has written a letter," and "A letter has been written by him," the action and therefore the power is one and the same, though the subject is, to suit the occasion, the agent in the one case and the patient in the other.

14.—A SINGLE PRINCIPLE.

Philosophers have been fond of reducing all things to one principle, which they have variously called the One ($\tauὸ ἓν$), the All ($\tauὸ πᾶν$), the Absolute ($\tauὸ ὅλον$), the Being ($\tauὸ ὄν$), the principle ($\eta ἀρχή$), &c. But the difficulty has always been to get the many, the various, the several, out of the one. The origin of this difficulty has been the pre-supposition that the one is a simple monad, possessed of only one property. The true One is a Spirit, a Monad indeed, but possessed of at least tripartite properties, of which one is power, which is capable of all possible functions that may be suggested by a rational imagination and resolved upon by a free will. It may be demonstrated that an absolutely simple monad with only a single attribute cannot exist, act, develop itself, or generate anything else. Hence the vanity of all speculations on the absolutely One.

15.—PHILOSOPHY.

Philosophy is, according to etymology, the love of wisdom. The term is said to have originated with Pythagoras. History is the knowledge that the thing is so ; philosophy, the knowledge of the reason why it is so. It is therefore the science of the causes of things. To philosophise is *rerum cognoscere causas*. But in this country we talk of natural as well as moral philosophy. Even history has a philosophy.

16.—UNDERSTANDING PROPER.

The term understanding, of which Hamilton makes little use, we call, strictly speaking, the apprehensive, observant, or empirical faculty, under which are included perception, consciousness, memory, and such parts of judgment as are due to experience. Reason we employ with Hamilton as the intuitive faculty, *locus principiorum*, the Vernunft of the Germans, and the *νοῦς* of Aristotle. But we embrace in it also the reasoning power, which is simply an application of one of the principles evident to reason. This Hamilton assigns to the intellect, *διάνοια*, the *λόγος* of Aristotle. Hence reason comprises the noetic and dianoetic, or the intuitive and logical faculties.

17.—A SENSATION.

Reid says that a sensation can only be in a sentient being ; it really exists ; it is a simple and original affection or feeling of the mind ; and it is caused by something external to the sentient. Hamilton in his dissertations on Reid does not in the main dissent from these particulars. But he refines too much, and does not after all clearly distinguish sensation from perception.

18.—THE MATURE MIND.

It is true that the babe evolves out of itself the man. Hence it has been the fond aim of many an enquirer to detect in the babe that which accounts for the manifold powers and capacities of the man ; and, in particular, to explain the import of perception from that which takes place in the first act of sensation. But the attempt is vain. All we can do is to note the gradual outburst of new powers and capacities up to the point of maturity, astonishing us with the exuberant blossoming forth and ripening of the latent potency of mind. For it is no less true that it is the seed that in proper conditions evolves the new-born babe ; and that another step back leads us to the parent. At this stage only do we stand face to face with even the proximate cause of that development, which attains its height in the adult. Hence it is not by descending into the depths of nascent experience, but by making a dexterous use of consciousness, abstraction, and intuition, that we are to arrive at the full and precise import of sensation or perception. Only He who made us could predict the development of our being.

19.—INTUITION.

Kant uses the word *anschauung* in a wide sense as empirical, and in a strict sense as pure. In the former case it appears to embrace all that is included in sense-perception. In the latter it regards only extension and shape. Neither of these is what we mean by intuition. It is the faculty by which we know all that is distinguishable from the mere sensation or apprehension by means of abstraction. Hamilton calls the immediate knowledge obtained by perception intuitive.

Reid refers only to abstraction, the companion of intuition. Without this faculty we could not proceed a single step beyond the singular and the phenomenal.

20.—MERE BEING.

Hegel, *Wissenschaft der Logic*, p. 72, starts on the pursuit of knowledge apparently with the following syllogism:—

Being, mere being, is the indefinite immediate.

Nothing, mere nothing, is the indefinite immediate.

∴ Mere being and mere nothing are the same thing.

As a syllogism, this is faulty, as the middle term is particular in both premises. Because two things agree in two negative characteristics, it does not follow that they are the same. But if the middle be counted universal in both premises, they are both false. For mere being is not all the indefinite immediate. Mere quality comes under the same category, and so does mere relation. And bare nothing is so far from being indefinite that it is intensely definite. The conclusion, moreover, that mere being and mere nothing are one and the same, is neither self-evident nor demonstrable, but positively self-contradictory. Let us rectify the premises :

Mere being is indefinite being.

Mere nothing is definite nothing.

And it is manifest there can be no conclusion, for there is no middle term. The two terms are not even on a par. Being (*seyn*) is a property of things ; but nothing (*nichts*) is the negative of thing, not a property at all. As soon as we rectify this disparity, as being and not-being are not one and the same, we see the self-contradictory nature of the statement.

The plain and simple truth regarding the matter is that mere being, that is, being without attribute, is impossible, or, in other words, that being subsists, not in abstract indefiniteness, but in concrete definiteness. This is a self-evident principle of some importance, but not fitted to be by itself the prolific source of a system of philosophy, especially when presented in a paradoxical form.

21.—SUBSTANCE AND QUALITY.

Those who from Hume downwards and upwards deny or ignore the existence of substance as a property of things, have

simply not attended to the proper meaning of the word. It is one of those relative properties of things that come to light by an act of abstraction and intuition. By abstraction we distinguish holding and being holden. By intuition we know that either implies the other, the being holden the holding, the holding the being holden. A standing under implies a standing on, and the reverse. Such properties, though separable in abstract thought, are inseparable in reality. Precisely so it is with cause and effect, cause and quality, quality and substance, with effect and being, being and quality, thing and relation. As objects of imagination, these are separable; but as parts of the reality of things, they are necessarily co-existent. Hence, when Hume made himself the bond slave of mere sense without intuition, he simply dislocated the right arm of his mind, and unfitted himself, except by a certain mental inconsistency, for any rational investigation of the nature of things. And if he had reflected that existence itself comes to view only by intuition and abstraction, he would have found that impressions and ideas had fled from his grasp at the same time with the mind that received and the things that gave them. For without the existence of even impressions more or less transient, all would have been an utter blank. Sir William Hamilton, that master of metaphysical conception and expression, warns us of the true meaning of substance.

22.—INTUITIVE OBSERVATION.

Reason is pre-eminently the faculty of intuition. This faculty is peculiarly interesting to us, as it gives rise to the science of metaphysics, which Aristotle variously styles *πρώτη φιλοσοφία*, *σοφία*, *θεολογία*, *θεολογική ἐπιστήμη*, *φιλοσοφία*. It is the science of *ἀρχαί*, principles, and *αἰτίαι*, causes of things. It treats of *τὰ μετὰ τὰ φυσικά*, the things after, beyond, and at the root of physical things. Philosophy in general answers the question why, which may be resolved into the three questions, whence, how, and wherefore. The first is the question of first principles (*ἀρχαί*), and so of the first cause, and the omnipotence from which it proceeds. This is the field of metaphysics. The second is the question of means or mediate causes (*αἰτίαι*). This comes under the range of the sciences which deal with secondary causes, and leads on to omniscience.

The third is the question of final causes (τέλη), and points to an absolute will. If philosophy proper is to be distinguished from metaphysics, the former refers to αἰτίαι causes, the latter to ἀρχαί, principles. They both transcend and explicate the empirical.

23.—EXTERNAL.

External has here rather a metaphysical than a physical meaning.

24.—PERCEPTION.

The account here given of perception is substantially the same as that of Reid, p. 258. It is difficult to speak without some degree of obscurity or ambiguity about a process which in its unity involves so many elements that are observed, one at least by sensation, and the rest by intuition, and that are made separate objects of attention only by an act of abstraction. And hence Hamilton thinks there are some indications in Reid's Essays of what he calls Hypothetic Realism under the finer form of Egoistical Representationism, a theory which regards the immediate object of the perceptive faculty as a modification of the mind or self, representative at the same time of a real external object. But at the same time he fairly remarks that Reid never formed a conception of this theory as distinct from the plain and broad theory of Idealism which he combats, namely, that the immediate object of the mind is an idea, by means of which it comes to know the external reality. It is abundantly evident that Reid, whatever may have been his occasional inaccuracy of expression, rejected any mental *tertium quid*, or rather *medium quid*, in perception between the mind and the external object. He writes to Dr. Gregory the following remarkable passage, Hamilton's Reid, p. 22: "It would be want of candour not to own that I think there is some merit in what you are pleased to call my philosophy; but I think it lies chiefly in having called in question the common theory of *Ideas or Images of things in the mind* being the only objects of thought; a theory founded on natural prejudices, and so universally received as to be interwoven with the structure of language. Yet, were I to give you a detail of what led me to call in question this theory, after I had long

held it as self-evident and unquestionable, you would think, as I do, that there was much of chance in the matter. The discovery was the birth of time, not of genius; and Berkeley and Hume did more to bring it to light than the man that hit upon it. I think there is hardly any thing that can be called *mine* in the philosophy of mind which does not follow with ease from the detection of this prejudice." Hence it appears that Reid was perfectly aware of the fundamental point of his whole philosophy, the carrying out of which in its entire consequences constitutes, as we shall see, the superiority of his theory of the mind over that of Sir William Hamilton in unity and stability. Denying altogether the real existence of ideas as objects of the observant faculties, he held the thing itself to be the only object of the mind in perception. He was therefore, as Hamilton phrases it, a Natural Realist. We shall see that he carried out his principle consistently in all the other processes of the intellectual faculty.

On the remarks of Hamilton on Reid, pp. 820-2, we observe, that when Reid uses the word "sign" to denote the secondary qualities, he merely employs a loose figure. 1. When he says that if sensation be produced, the corresponding perception *follows*, even when there is no object, he speaks rather of sequence in thought than in time. 2. When he seems to suppose the mind in the brain and the pain felt in the toe, he is not inconsistent with himself nor his doctrine, whatever may be the fact on this point. 3. When he applies the word inspiration to perception, he is merely using a figurative illustration. 4. When he says that the perception of an object implies a conception or notion of it, he speaks according to the reality of things. 5. In calling the remembrance of the past and distant an immediate knowledge, Reid simply means that there is no intermediate *idea* between the reality and the mind; which is what he ought to say. 6. The doctrine maintained by him, that perception of distant objects is possible, is of a piece with his whole theory of cognition. 7. In seeming to hold that perception is a sort of inference, he means such inference as is involved in intuition. 8. He uses the word belief loosely, to denote the knowledge of existence involved in perception.

25.—SENSIBLE QUALITIES.

Qualities have been variously divided by philosophers. Aristotle's division into common and proper sensibles is the most simple and obvious. The common sensibles according to him are magnitude, figure, motion, rest, and number. The number might obviously be increased. They are common to sight and touch, and the last three in some measure to all the senses. It is remarkable, however, that they are not objects of the sensitivity, strictly so called, but of the perceptivity, being given, not by sensation, but by intuition on the occasion of sensation. They are, moreover, not real qualities in the proper sense, but relations of time and space. This is the true principle on which to distinguish them from the proper sensibles.

Locke divides the qualities of bodies as follows: "First, such as are utterly inseparable from the body in whatsoever state it be," and these are solidity, extension, figure, motion or rest, and number. "Secondly, qualities, which are nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities. To these might be added a third sort, which are allowed to be barely powers," such as the power in fire to produce a new colour or consistency in wax. The first of these classes is heterogeneous, as it contains the relations included in Aristotle's common sensibles, along with one real quality, namely, solidity, which must mean resistance or ultimate incompressibility, as it is in the same list with extension, and therefore must be different from it. Now it is quite true that this property is inseparable from matter. But so are gravity and elasticity, cohesion and repulsion, and inertia, if it can be called a property. These may be called common properties of matter. The so-called secondary qualities are also heterogeneous. Tastes and smells are immediate qualities of the things tasted and smelled. Sounds and colours are mediate qualities of the things heard and seen. Besides, they are not the effects of the so-called primary qualities, but co-ordinate companions of them. The third class are what we have called experimental qualities. They are quite as original as any of the former classes. Moreover, the principle of division here is fallacious. Locke describes the second and third classes of

qualities as merely powers to affect the senses directly or indirectly. But the primary qualities, so many of them as are really qualities, are likewise nothing but powers to affect the senses ; and in this respect all the classes are on a common footing.

Hamilton's primary qualities are extension, divisibility, size, density or rarity, figure, incompressibility absolute, mobility, situation. His secundo-primary are co-attraction (including gravity and cohesion), repulsion, and inertia. On these we remark that—1. Extension, divisibility, size, figure, mobility, and situation belong to relation, not to quality. 2. Density or rarity is scarcely entitled to the rank of a primary quality. And 3. Gravity, cohesion, repulsion, and inertia may be classed in the same rank with incompressibility, as common properties of matter. It is vain to say that impenetrability is at all more essential to matter than gravity, or repulsion, on which it depends. We cannot tell antecedently what is essential to matter. It is equally vain to suppose that the properties of matter can be reduced to any one or more of these primary ones. Hamilton further states that the secondary qualities, as manifested to us, are not in propriety qualities of body at all. "As apprehended, they are only subjective affections, and belong only to bodies in so far as they are supposed furnished with the powers capable of specifically determining the various parts of our nervous system to the peculiar action, or rather passion, of which they are susceptible ; which determined action or passion is the quality, of which alone we are immediately cognisant, the external concause of that internal effect remaining to perception altogether unknown."—Hamilton's Reid, p. 853. On this we submit that—1. He here confounds the quality of the object with "subjective affection," that is, the cause with the effect ; and at the same time consciousness with perception, inasmuch as "the subjective affection" is the object of consciousness, not of perception. 2. He virtually avows himself so far to be a Hypothetic Realist, and so falls in with that which he had denounced as the error of Brown ; for he says that bodies are "*supposed* furnished with the powers" in question, "the external concause of that internal effect remaining to perception altogether unknown." 3. The mental philosopher here wanders from his proper field in the

region of physiology, and so misrepresents the procedure of the mind in perception ; for he talks of these powers being "capable of specifically determining the various parts of our nervous apparatus to the peculiar action, or rather passion," in question, a matter of which the mind in perception takes no cognisance whatever. 4. The mind in perception regards not "the subjective affection," but the quality or energy which produces it, and to this primarily attaches the name, as sweetness in sugar. 5. There is precisely the same reason for so regarding the secondary as the primary qualities : sweetness, for example, as resistance, inasmuch as the cause of the sensation in either case is in the external object affecting the mind. 6. And the external object so qualified is perceived to be either the body of the percipient, when the subjective affection originates there, or something external to his body, when this affection takes its rise beyond the confines of the body. This is not the only instance in which Hamilton wavered from his theory of perception, which he calls Natural Realism or Dualism, and declares to be that of Reid.

Reid points out two distinctions between the primary and secondary qualities of Locke. The former are clear and direct ; the latter obscure and relative. But these distinctions are neither fundamental nor tenable. Aristotle's division, given above, is the only simple and obvious distinction of sensible qualities.

26.—AFFECTIONS OF THE SENSIBILITY.

By the sensibility we know effects from without. By consciousness we know sensations. By intuition we know existence. Hence Hume's only fountain of knowledge is consciousness. He ignores effects, and therefore the sensibility. He should by his principles ignore intuition, and therefore existence. But what would sensations or impressions be if existence be disowned ? And what is sensation without a *sensate* or a *sentient* ?

27.—CONSCIOUSNESS.

Reid says, "Consciousness is only of things in the mind, not of external things. It is improper to say, I am conscious of the table which is before me. I perceive it, I see it, but

I do not say I am conscious of it."—Hamilton's R., p. 223. Hamilton charges Reid with the error of making consciousness a special faculty, co-ordinate with perception, and having for its peculiar object the present passions and operations of our minds. Met. I., 210. He himself holds, on the contrary, that it is the genus under which our several faculties of knowledge are contained as species, and is cognisant not only of the operations of the mind, but of their objects—pp. 207, 210. To settle this point, we must have some essential difference or property of consciousness on which all are agreed. Now Hamilton says, Met. I., 193, "Consciousness is, on the one hand, the recognition by the mind or ego of its acts and affections; in other words, the self-affirmation that certain modifications are known by me, and that these modifications are mine. But, on the other hand, consciousness is not to be viewed as anything different from these modifications themselves, but is in fact the general condition of their existence or of their existence within the sphere of intelligence." The former part of this definition agrees with that of Reid. The latter part may be accepted if the word *separate* be put in place of "different." As it stands, it must be rejected. For the modification and the consciousness, however inseparable, cannot be affirmed to be identical. Consciousness is a concomitant knowledge of the mind's modifications. But many of these modifications are not knowledge. Is a conception, of which I am conscious, knowledge? Is a volition knowledge?

Hamilton farther states that our consciousness is co-extensive with our knowledge or with our cognitive faculties, pp. 206, 207. This is readily admitted. Have we not already agreed that it is co-extensive with all our mental affections? He adds, however, that "this is convertible with the assertion that consciousness is not a special faculty, but that all our special faculties of knowledge are only modifications of consciousness." If this mean that the kind of knowledge called consciousness, that accompanies our acts of perception, intuition, and memory, is identical with or the genus of the knowledge involved in perception, intuition, or memory, we must decline to accept the statement, and must, on the other hand, hold with Reid, that consciousness is a special faculty co-ordinate with the other cognitive faculties.

Hamilton again asserts that an act of knowledge may be expressed by the formula *I know*, an act of consciousness by the formula *I know that I know*, Met. I., p. 193. The general formula is admitted ; but the latter is only a formula, not the formula of consciousness. *I know that I doubt, purpose, or love* is equally a formula of consciousness. Hence the formula of consciousness is *I know that I have a certain mental affection*. Here the word know expresses the genus under which consciousness comes, which has for its object the mental affections, and is thus distinguished from perception or memory, by which we know external or former scenes.

He farther expressly holds that to be conscious of the operation of a faculty is, in fact, to be conscious of the object of that operation, p. 211. And he affects to prove this by showing that the knowledge of an operation necessarily involves the knowledge of its object, pp. 211, 212. But even if this be granted, the former proposition does not follow, unless consciousness be convertible with knowledge, which is the point at issue. He then enters into an elaborate discussion in the 12th and 13th lectures, to show that the knowledge of a mental operation involves the knowledge of its object, because the knowledge of a relative involves that of its correlative, and the act of memory or perception includes the knowledge of its object, through the whole of which runs the *petitio principii* that consciousness and knowledge are convertible terms. But since consciousness is being aware of our own doings, it is plain that perception or memory is not consciousness, and that the knowledge of a thing by its correlate is certainly not consciousness. To elucidate the real state of the case let us take the professor's own example : "I know that I know a book." The question is, how do I know the book ? To arrive at the answer let us dismiss the general term know, and restore the special and proper terms. *I see a book*. This is the act of perception. It follows that I know the book because perception is a mode of cognition. *I am conscious that I see the book*. Here the emphasis lies on the word *see*. The new object of knowledge is not the book, but the seeing of the book. The new is plainly different from the old.

It may be still thought, however, that the consciousness of seeing the book involves a consciousness of the book. But

seeing is a complex act, including the sensation and the several acts of intuition which are inseparable from it. Now the sensation and the accompanying intuitions are within the consciousness; but the effect, the otherhood, the outwardness, the cause, the quality, the thing, which are the objects of sensation and intuition, are not within the range of consciousness, but of perception. In like manner I may know the book though I do not see it, and so be conscious of knowing it while it is not within the sphere of my consciousness. Hence it is evident that consciousness does not include within its proper range the object of perception any more than that of memory or imagination.

This clearly brings out the fact that knowledge is the genus under which come consciousness, perception, memory, and all other modes of cognition. In the elementary sensation three kinds of knowledge concur, each with a different object. By sensation I feel the effect; by intuition I descry the cause; by consciousness I am aware of the sensation. And I am the one sentient, intuent, conscious mind, in which this single act of observation takes place, an act which can only be separated into its elements and concomitants in abstract thought. Hence we find an act of perception involves a knowledge, though not a consciousness, of the thing perceived.

Mansel opens his *Metaphysics* with the following sentence: "Consciousness, in its relation to the subject or person conscious, is of two kinds, or, rather, is composed of two elements—the presentative or intuitive, and the representative or reflective. The phenomena of the former class may be distinguished by the general name of *Intuitions*; those of the latter by that of *Thoughts*." This is we conceive in many ways at variance with the real nature of consciousness. 1. Consciousness is not of two kinds: it is always the mind's being aware of its own proceedings. Neither is it composed of two elements: it is a simple cognisance of what goes on in the mind. 2. "Presentative" does not describe consciousness: concomitant would be better. "Intuitive" is equally inapplicable to consciousness, which is the simultaneous intelligence which accompanies all the phenomena of the mind. Presentation is applied by Sir William Hamilton to perception. Intuition is properly the act of reason cognising

abstract principles. "Representative" and "reflective" apply only to reflection, which is not consciousness, but afterthought. 4. If the phenomena here mentioned be parts of the state of consciousness itself, they are not properly or usefully called either "intuitions" or "thoughts." If the phenomena, however, refer to the objects of consciousness, these are not confined to intuitions and thoughts, but to all modes of mind, intuitions being properly modes of the intuitive reason and thoughts of the imagination. 5. Is consciousness intended here to include perception and memory? Are intuitions intended to denote sensations or perceptions? This sentence is not well fitted to be the basis of a system of metaphysics.

28.—ZENO'S SOPHISMS.

Diodorus Kronus affected to disprove the existence of motion in the following manner:—If matter moves, it does so either in the place in which it is or in the place in which it is not. But it does not move in either, therefore it does not move at all. The answer is two-fold, according as place is taken in a wide or a strict sense. If taken in a wide sense, matter may certainly move in the place in which it is, as the moon in the sky, and in the place in which it is not now, if transported thither, as a horse from Italy in Greece. But if, as Diodorus evidently meant, place be the space filled by the matter, the statement is not proper, as *in* does not apply here to motion, except in special cases, but only *from* and *to*; while the element of time as well as space must be taken into account. Thus matter may be properly said to move *from* the place in which it *is* to the place in which it *will be*, or to *have moved from* the place in which it *was* to the place in which it *is*. Exceptional cases are a sphere moving round its centre, and a cylinder or other figure, all whose sections are parallel circles at right angles to the right line joining their centres, moving around its axis. These, as before, may move so in the place where they are or may be. The dilemma, therefore, is either invalid or improper.

The most famous of Zeno's sophisms professing to show the inexplicability of motion is that of Achilles and the tortoise. If Achilles, the swiftest of men, runs after a tortoise, the slowest of animals, he can never overtake it. For

when he has arrived at the spot from which the tortoise started, the latter has reached a second point in advance ; and when Achilles has gained this point, the tortoise has attained a third point in advance, and so on *ad infinitum*. Hence Achilles can never overtake the tortoise, as at every new point attained there is an interval between them. The sophistry lies here in the ambiguity of the word *never*. The precise inference is, that Achilles can only in an infinite number of terms of this series overtake the tortoise. But "in an infinite number of terms of this series" does not mean *never*, nor anything approaching to it. For never means infinite duration ; but an infinite number of terms of a decreasing geometrical series, as this is, is a finite sum of time or space.

In the case in point, if Achilles run forty furlongs in an hour and the tortoise one, and Achilles stand at the beginning of the first furlong and the tortoise at the beginning of the fortieth, they will both arrive at the end of the fortieth furlong at the end of the hour. Yet Achilles' space and time would be the sum of a geometrical series of which the first term would be $\frac{39}{40}$ of the forty furlongs and of the hour, the common ratio $\frac{1}{40}$, and the number of terms infinite. To find the point of overtaking is simply the problem of cutting a line externally in a given ratio. The line is the starting distance between the runners, and the ratio is that of their respective velocities. Most of the puzzles about motion arise from forgetting the element of time, or inadvertently *confounding the infinite divisibility of a line with its infinite multiplication*. Because a finite line is infinitely divisible, we leap to the assumption that it is infinite in length.

29.—MEMORY.

Reid declares that "by memory we have an immediate knowledge of the past."—Essay III. On this Hamilton notes : "An immediate knowledge of a past thing is a contradiction. For we can only know a thing immediately, if we know it in itself or as existing ; but what is past cannot be known in itself, for it is non-existent." The contradiction is not shown by the "for." Immediate knowledge is knowledge obtained without a medium. Is time or space a medium of knowledge ? If not, the contradiction does not appear. Besides, Reid simply means that there is no interven-

ing idea by which the past is represented to the mind in remembrance, as his annotator elsewhere acknowledges—p. 821, § 5. And in this Reid is faithful to the evidence of experience, as well as consistent with himself. When I think of the castle I saw some years ago, the object of my mind is the real castle as then and there existing. The way in which I am able to think of that former object of my vision is not before my mind at all. But there is no ground whatever for any representative medium intervening between the mind and its former object.

30.—IDEA.

Plato evidently means by idea the object of imagination.—Resp. X., pp. 506 B–597 B ; Tim., p. 28 A, Steph. Aristotle uses it to denote the form or pattern of a thing, and evidently the object of the conceptive faculty.—Metaph. VI 16, XIII. 1 ; Eth., N. I., 6.

Descartes says : *Ulterius vero considerantes ideas, quas in nobis habemus, videmus quidem illas, quatenus sunt quidam modi cogitandi, non multum a se mutuo differre, sed quatenus una unam rem, alia aliam representat, esse valde diversas ; et quo plus perfectionis objectivæ in se continent, eo perfectiorem ipsarum causam esse debere.*—Princ., p. 5. Whence it is evident that he considered ideas to be modes of thinking, and at the same time representatives of things. Locke defines an idea to be “the object of the understanding when a man thinks.” But he says, “To discover the nature of our ideas the better, and to discourse of them intelligibly, it will be convenient to distinguish them as they are ideas or perceptions in our minds, and as they are modifications of matter in the bodies that cause such perceptions in us. . . . Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call idea ; and the power to produce any idea in our mind I call quality of the subject wherein that power is. Thus a snowball having the power to produce in us the idea of white, cold, and round ; the powers to produce those ideas in us, as they are in the snowball, I call qualities ; and as they are sensations or perceptions in our understandings, I call them ideas ; which ideas, if I speak of them sometimes as in the things themselves, I would be understood to mean those

qualities in the objects which produce them in us."—B. II., ch. 8, § 7, 8. Here this celebrated author embraces sensations, perceptions, and whatsoever the mind perceives in itself under the head of ideas. These he declares to be *in* the mind, while he defines them to be the objects of perception, thought, or understanding. He also speaks of them as *in* the things themselves, when he means the qualities which are the causes of them. It seems, then, that he considers them to be properly in the mind, and so agrees with Descartes against the original authors and employers of the word. The muddle appearing in this passage has introduced irretrievable confusion into the philosophy of Locke and his followers. It has also brought the term into disrepute, when the fault lies in those who abuse it.

31.—IMAGINATION.

Reid is thorough-going and consistent in his account of the contemplative faculties. He finds one object alone, never any intermediate object, before the contemplating mind, a real object in perception, consciousness, memory, and knowledge, and an ideal one in pure imagination. This view alone is in harmony with our experience. Hamilton introduces a two-fold confusion into his theory of the contemplative faculties. First, he denies the immediate knowledge of a distant object in perception and of a past object in memory, because neither is in actual contact with an organ of sense.—H. R., p. 885, § 43, p. 814; C., p. 822, 6. In this he wanders from the point in question, which is not whether there be a physical medium, of which the mind evidently has no cognisance whatever, but whether there be an intervening idea representative of the real object to the mind. The child perceives distant objects long before it is at all aware of an intervening physical medium. There is therefore a confusion of the physical with the psychical.

And, secondly, he holds the distinction of presentative and representative knowledge in a sense inconsistent with a simple theory of cognition, making perception and consciousness an immediate presentative knowledge, and memory a mediate representative knowledge. He thus describes the object of imagination, p. 809: "A representation considered as an *object* is logically, not really, different from a represen-

tation considered as an *act*. Here object and act are merely the same indivisible mode of mind, viewed in two different relations." He thus makes the act of the mind to be the object of the mind in memory or imagination, a thing purely impossible. The act of the mind is the object of consciousness, but by no means that of memory or imagination. In point of fact it is totally different. When I remember Edinburgh, the remembrance is the act and Edinburgh is its object. When I think of a centaur, the conception is the act, and the concept, the centaur, is the object of the mind, which I need not suppose to have any existence whatever. I may call it an idea. But if I speak intelligently, the idea in this its proper sense is merely another name for the object of my imagination. Sir William Hamilton is, according to his own nomenclature, a Natural Realist in consciousness and some kinds of perception, and a sort of Idealist in memory and imagination. This is a glaring inconsistency in his theory of the mind, and has imported some confusion into his criticism of Reid.

32.—THE INFINITE.

The characteristics of the infinite here drawn apply, *mutatis mutandis*, to all such negative terms, and especially to the unconditioned. This Sir William Hamilton declares to be incognisable and inconceivable. Since it is a negative term, as long as it is otherwise undefined, it is not of much consequence what assertion is made concerning it. But when we remember that in his famous critique on Cousin, the unconditioned figures as "*unity, identity, substance, absolute cause, the infinite, pure thought,*" &c., and in fact and in chief as the Divine Being, we are bound by the strongest motives to examine the statement. Let us consider the Unconditioned, first, as otherwise undefined, and next as otherwise defined. 1. As otherwise undefined it is conceivable, but unknown. It is conceivable; for I can conceive a condition, and therefore the absence of the condition. The unconditioned is precisely as intelligible as any other negative whatever. Incognisant, involuntary, impotent, &c., are quite as intelligible as cognisant, voluntary, potent. It is unknown, simply because it is undefined. And whether it is knowable, I cannot tell, simply because it is negative. This

constitutes the unprofitableness of all such terms as a basis of investigation. 2. As otherwise defined, it is so much the more conceivable and becomes so far cognisable. If it mean the one, the substance, the absolute cause, the being, we begin to learn the hitherto concealed fact, that that which is unconditioned in one respect is conditioned in other respects; for unity, substance, cause, being, are all conditions: and the farther all-important fact, that the unconditioned, if a being, must have qualities; and every quality is a condition. Every such condition is a new point of conceivability and cognisability. And if the Unconditioned mean the Divine Being, it becomes wonderfully lucid and intelligible to our minds. For it obviously means that He is free from all conditions as to His intrinsic being, and is therefore without beginning of being, and at the same time the intelligent, free Creator of all other beings. The Unconditioned, then, in the highest sense of freedom from all conditions of existence, is at the same time sublimely conditioned by the attributes of infinite, eternal, and unchangeable being, wisdom, holiness, and power. Sir William quotes such phrases as this: "A God understood would be no God at all." We may fairly reply: "A God not understood would be no God at all." The one statement is quite as valid as the other. The truth is, we "know in part." Put in the words "in part," and the former proposition is wrong and the latter right. Put in the word "wholly," and the former is right and the latter wrong. This shows that the former proposition means tacitly, "A God *wholly* understood would be no God at all." So much for unqualified statements.

Mansel, in his "Limits of Religious Thought Examined," agrees with Hamilton that the infinite is inconceivable and incognisable, and naturally concludes with him, that there can be no metaphysical theology. On the same ground he acknowledges that there can be no metaphysical philosophy. But any man with an inkling of logical discrimination will perceive the futility and emptiness of all that is said on this subject in his second and third lectures. He states, Lect. II., that "To conceive the Deity as He is, we must conceive Him as first cause (Hamilton's Unconditioned), as absolute, and as infinite (Hamilton's two branches of the Unconditioned)." And he proceeds to argue that these attributes are incon-

ceivable in themselves and contradictory of one another. Now *the Infinite* is that which has no end: I can conceive an end, and therefore its absence. He asserts that we cannot be conscious of the Infinite. True; to be conscious of a negative as such is impossible; but that is no limit to consciousness, which by its very nature takes cognisance only of the positive. But when you are conscious of perceiving the blue, you are quite aware of the absence of the red, that is, of the unred. Hence, though you cannot be conscious of a negative, you can not only conceive, but be aware of it. To enhance the impossibility, he insists that the Infinite must be infinite in all respects, and of course in contradictory respects. But we must decline to be bound to this inconceivable monster. For our Infinite is supposed to *be*; and infinity does not apply even to *being*. And as it has being, it must have quality and relation; and these are in one respect at least finite. Hence we must hold that the Infinite in some respect must, if it exist at all, be finite in some other respects.

The Absolute, as Mansel takes it, is the unrelated, another negative term on which the same remarks may be made. In particular, the unrelated in all respects is impossible. A being without external or internal relation is precisely as impossible as a being without quality. The Absolute, which we accept, is a possible absolute, that is, a being unrelated to any antecedent being, simply because there was none such, but at the same time having intrinsic relations and capable of creating extrinsic ones. Hamilton uses the Absolute to denote the whole ($\tau\acute{o}\ \delta\lambda\omicron\nu$) or the perfect ($\tau\acute{o}\ \tau\acute{\epsilon}\lambda\epsilon\iota\omicron\nu$), which is a positive, and therefore intelligible idea. He affirms, indeed, that it is the contradictory of the Infinite; but this can only be sophistically argued by shifting its meaning to the finite. But the finite means properly the part, not the whole. The infinite, being a whole, is at the same time absolute.

When a philosopher calls the Divine Being the First Cause, he ought to be aware that he is speaking loosely. A cause is strictly a potency in action; and that in which the potency lies is only improperly called the cause, being properly the potent when at rest, and the agent when at work. Such a being is both conceivable and cognisable. But when the

• Omnipotent Himself and the putting forth of His power at the behest of His will are expressed by the one term, we may expect confusion. Accordingly Mansel affirms that the Absolute and the First Cause are incompatible. "A cause cannot be absolute, and the absolute cannot be a cause." This follows, indeed, if the Cause be a literal cause, and the Absolute be absolute in every respect. But as soon as we reflect that the First Cause, when applied to the Deity, must mean the Omnipotent, and the Absolute means simply the undervied, the contradiction vanishes.

Hence we draw breath once more. For we find that by attending to the logical distinctions of things, and avoiding the shiftings of meaning to which words are liable, we may arrive at the metaphysics of truth, and that the concocting of impossibilities by means of negative terms is no part of the business of a philosopher.

33.—DREAMING.

On the questions of coma, mesmerism, clairvoyance, &c., our limits do not permit us to enter.

34.—FAITH.

The words "faith" and "belief" are sometimes applied to the axioms of the intuitive faculty. But this is unnecessary, because we have other words to express these truths. It is also unadvised, if not even improper, because it leads men to surmise that self-evident principles are open to the same doubt as some matters of human testimony. It is better, therefore, to confine such words to their proper field.

35.—AN EFFECT MUST HAVE A CAUSE.

Hume insists on the very obvious fact that we cannot tell antecedently what effect a given cause will have, nor what cause will have a given effect. But our ignorance on these points does not touch the intuitive principle, that a given effect must have an adequate cause. In demanding an argument for the necessary connexion of cause and effect, he alludes to the fact that a burnt child dreads the fire, and adds, "I cannot now discover an argument, which, it seems, was perfectly familiar to me long before I was out of my cradle." He proceeds to assign custom as the origin of the

principle of cause and effect. But 1. The principle, being self-evident, does not require or admit of argument. 2. Custom in itself leads only to probable succession, not at all to necessary sequence. We are accustomed to the succession of day and night; but we never imagine that the day is the cause of the night. 3. The child concludes that fire will burn the finger from a single experiment, and therefore antecedent to custom. 4. It is an undeniable fact that we are sure that a given effect must have a cause. 5. After all Hume's reasoning refers to a given effect having a certain cause, which is a question of experience, and not to the given effect having some adequate cause, which is matter of intuition. Hume admits the existence of impressions and ideas; but he did not reflect that existence itself is known only by intuition on the occasion of sensation or some other mental action. Else he must have thrown away impressions and ideas after cause, matter, and mind, and so made his philosophy a solitude.

36.—THE EFFECT CANNOT RISE ABOVE THE CAUSE.

Spontaneous generation is a misnomer; as those who advocate that which is so called endeavour to show by experiment that life may arise out of electricity and some other qualities of matter, and not out of nothing or without a cause. If this were proved to be a fact, it would not be at variance with the principle here enunciated.

The transmutation of species, if demonstrated by experience, would not be opposed to the law of causation, as it would merely show that one species had in it a power, awaiting the favourable opportunity, to give origin to another. The fly in its three forms might have been supposed a case of transmutation, when the larva produced the pupa. And if the pupa had propagated pupæ, it would have constituted a new species, and so presented an actual instance of transmutation. But it only produced the kind of fly which had generated the larva. This, therefore, is only one insect, which appears in two preliminary forms before it arrives at its perfect form. In like manner ovipara appears to us in two forms, the egg and the chick. The analogous stages of growth occur in the embryonic state of the viviparous animals. Setting aside such apparent cases, we find that the transmu-

tation of species is a speculation which wants the basis of fact. The obvious inference from all we know is that one species of plant or animal has no more power to produce another than one kind of mineral has to produce another.

The doctrine of evolution, on which Herbert Spencer and others build their philosophy of things, is a more comprehensive principle, including Darwin's transmutation of species as well as the so-called spontaneous generation. Any supposed involute either possesses in itself the power to produce the evolute in given circumstances or it does not. If it does, evolution may take place according to the law of the involute. Experience alone can determine what that law is, and consequently what is the definite power and range of the involute. But it is unphilosophical to assume a power where the corresponding effects have not been witnessed. This limits evolution to the ascertained laws of nature, and forbids us to generalize beyond the known facts. The farther the evolution can be traced back, the vaster the design displayed in the system of things. This sort of evolution goes on before us every day, and has its definite laws and lines of working. The cell germ has produced the full-grown plant or animal, and thereby proved that the potence for this effect was lodged therein.

But if the supposed involute does not contain in itself the potence to produce the evolute, there is no pure or proper evolution. The evolute is due no longer to the involute, but to an external agent, working with or without the involute. Water cannot rise above its level, but an external power may raise it. Inorganic matter cannot produce organization, much less organic life; but a living organism may draw matter to it and build it up in organic form. A plant cannot produce an animal, but an animal can assimilate vegetable matter and convert it into animal tissue. One species of elementary matter cannot produce another, but it may enter into various combinations with it. One species of plant or animal cannot originate another: a bramble may propagate a bramble, but not a vine; a frog a frog, but not an ox. Hence there are at least as many breaks in evolution as there are species in the mineral, vegetable, and animal kingdoms. The first start of every new thing, not involved in any antecedent thing or combination of things, brings into view a creative

power manifesting the existence of an Almighty Being, whose character and attributes are determined so far by the sum total of things so called into existence. At the root of every fresh evolution, of every new plant or animal throughout all the geological changes of the earth, lies this omnipotence, giving rise to that which could not arise out of the pre-existent state of things. Whether the newly emerging principle is provided at the moment when it is required, or laid up in universal nature at the absolute beginning of all things, is a question on which men will differ according to their antecedent bent. To the thorough-going evolutionist the latter may appear the more simple and the more sublime. The beginning of all things would in that case alone need the creative agency of the Almighty. And that agency would seem all the more stupendous and incomprehensible, as it would involve at one instant all that was ever to be evolved out of the new-born universe to the end of time. To the reflective mind, however, it will occur that there is no indication of undeveloped germs of life lying dormant for millions of ages until their day of development arrives, that the plan of occasional creation is no less compatible with unity of purpose and perfection of wisdom, and that it is more consistent with the economy of power which philosophy acknowledges in the nature of things and with the free agency of Him, who not only creates but constantly upholds all things by the word of His power. Modesty, therefore, prevents us from pronouncing in favour of development as an all-pervading law of nature, especially when it involves so startling an assumption and encounters so many adverse facts in the history of human experience.

37.—PERSON.

The one transcendent person is God, the Eternal and Almighty Being. It has been often taken for granted that a person is by the very nature of the thing finite. Now, it must be admitted that a person is definite, as every real thing is, and so far finite. But beyond and beside all this, there is no contradiction in the absolute Person being at the same time infinite. A person is simply an individual spirit, having intellect, will, and power. Here are four or five very definite and in that respect finite ideas. Who shall say, or rather

show, that in some other respect infinitude may not apply to all or some of them? On what ground can it be denied that power or will or intelligence without limit is possible? Space is a geometrical solid, having length, breadth, and thickness. These are very definite and so far finite ideas. Yet we know that in another respect this solid is infinite, and its length, breadth, and thickness are infinite. All this is obvious from the principle already laid down, that an infinite, if a real thing at all, is infinite only in some respects; while it must be definite, and consequently finite, in several other respects. Hence it follows, as a corollary, that a thing which is finite in some respect may be at the same time infinite in another respect. And hence, though many persons may be finite, yet it is quite possible that one may be in all essential respects infinite.

38.—CREATOR.

Creation, or making out of nothing, is sometimes regarded as a difficulty, if not an impossibility. It has to us no doubt its difficulty. But coming out of nothing, if there had been no antecedent being whatever, is the impossibility. On the other hand, coming out of nothing but the unlimited power of the Eternal Spirit cannot be shown to be impossible. And this is all that is meant by making out of nothing. It is making out of no pre-existent materials, but not out of no pre-existent power. What are all things but seats of force or power? And what is necessary for their origination but the boundless power of the Almighty Spirit?

39.—THE CARDINAL VIRTUES.

The four cardinal virtues of the ancients were justice, prudence, temperance, and fortitude. Prudence corresponds to truth, which is the intellectual virtue. Fortitude may be regarded as the right use of power. It is remarkable that goodness has no place in the list, and that all the four are species of equity, so far as they are moral at all.



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